
VocBench v1.3

User Manual

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Based on VocBench v1.3

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Executive Summary

This User Manual refers to VocBench (VB) v1.3. It provides a general introduction to VB user interface, functionalities, editorial workflow and operations allowed to Editors and Validators. It does not cover the actions allowed to Publishers and Administrators of VocBench.

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1 Introduction

VocBench¹ (VB) is a web-based multilingual vocabulary management tool developed by FAO. It transforms thesauri, authority lists and glossaries into SKOS/RDF concept schemes for use in a linked data environment. VocBench also manages the workflow and editorial processes implied by vocabulary evolution such as user rights/roles, validation and versioning.

VocBench supports a growing set of user communities, including the global, distributed group of terminologists who manage AGROVOC², FAO's multilingual agricultural thesaurus.

VocBench is optimized to be used within the following browsers:

- Mozilla Firefox
- Google Chrome
- Safari

Home | About VocBench

English English ไทย

VocBench

VERSION 1.3 (DEVELOPMENT)

Welcome to the VocBench

The VocBench manages concepts and terms in AGROVOC, FAO's agricultural thesaurus, and supports its evolution to an ontology.

[Learn more about the VocBench](#)

You must [log in](#) or [create an account](#) to use the VocBench.

What's new

- The VocBench Web Services Beta version has been released for developers of agricultural information management systems to incorporate the VocBench into their applications via [web services](#).

User login

Username:

Password:

☐ Remember me

[Sign in](#)

[Forgot your username or password?](#)

[Create an account](#)

VocBench Partners:

Food and Agriculture Organization of the United Nations
for a world without hunger

Kasetsart University
Bangkok, Thailand

Thai National Agris Center
Bangkok, Thailand

MIMOS Berhad
Kuala Lumpur, Malaysia

Acknowledgements for the revision of AGROVOC content to:

ICRISAT
International Crops Research Institute for the Semi-Arid Tropics

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Prof. Dagobert Soergel
UNIVERSITY OF MARYLAND

Figure 1. Entry Page.

¹ <http://aims.fao.org/tools/vocbench-2>

² <http://aims.fao.org/standards/agrovoc/about>

2 Login

Only registered users may access VocBench. To use VocBench, you have then to login (Figure 2), by:

1. Registering as a new user by creating an account,
2. Signing in, if you are already a registered user.

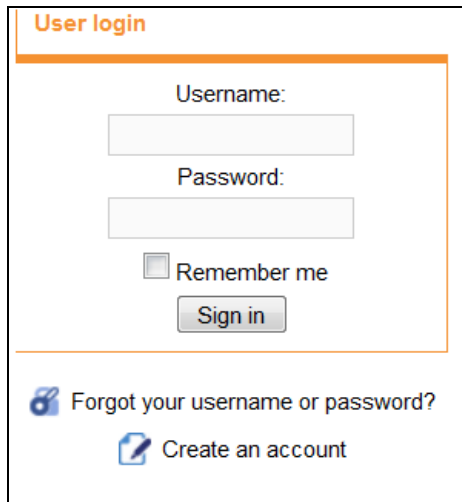
The image shows a web form titled "User login" in orange text. The form is enclosed in a light gray border. It contains two input fields: "Username:" and "Password:". Below the password field is a checkbox labeled "Remember me". A "Sign in" button is positioned below the checkbox. At the bottom of the form, there are two links: "Forgot your username or password?" with a blue icon of a person and a question mark, and "Create an account" with a blue icon of a document and a plus sign.

Figure 2. User Login.

1. Register as a new user and create a new user account:

To register as a new user, click on **Create an account**, and a User Registration form will pop up (Figure 3).

- Fill in the fields. Note: The fields marked with an asterisk (*) are mandatory.
- Select the Group(s), i.e. users' roles, you would like to register for: Click on the **[+]** sign, select from the drop down list the appropriate group, and click on **Add** (see Figure 4).
- Select the Language(s) in which you wish to manage your data: Click on the **[+]** sign, select from the drop down list the language(s), and click on **Add** (see Figure 4).
- Select the Ontology you would like to manage: Click on the **[+]** sign, select from the drop down list the ontology you wish to manage, and click on **Add** (see Figure 6).
- You may also insert a comment.
- After clicking on the **Save** button, a message appears, confirming your registration (see Figure 7).
- You will receive an email with the Subject title "Welcome to VocBench", informing you that your registration request was received.
- You can start using VocBench after approval by the Administrator, and after having received a second email with the Subject title "Activation of your account on VocBench", containing your registration details.

2. Signing in:

If you have already created an account, you may directly log in by entering your user name and password, and clicking on **Sign in** (Figure 2).

User Registration

Login name *

Password *

Confirm password *

First name *

Last name *

Email *

Affiliation *

Contact Address *

Postal code

Country *

Select

URL

Work phone

Mobile phone

Chat

Select Chat Types

Groups you wish to register for

Languages you wish to manage

Ontology you wish to manage

Comment (Max :255 Characters)

* Mandatory field

Save

Cancel

Figure 3. User Registration Form.

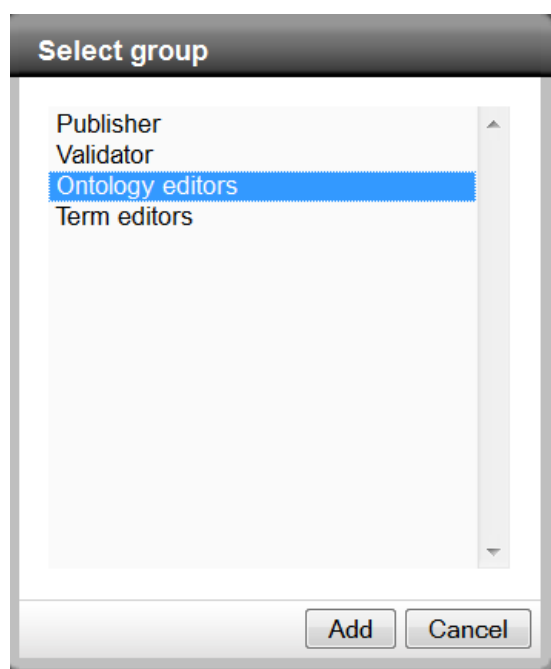


Figure 4. Select User Group.



Figure 5. Select Language.

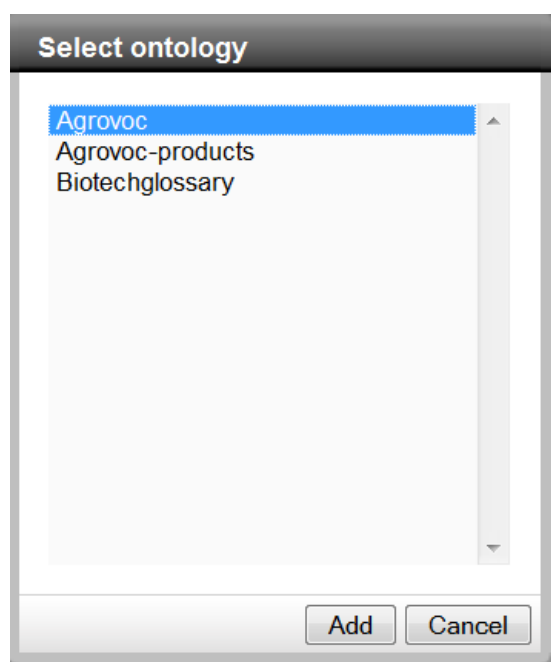


Figure 6. Select Ontology.

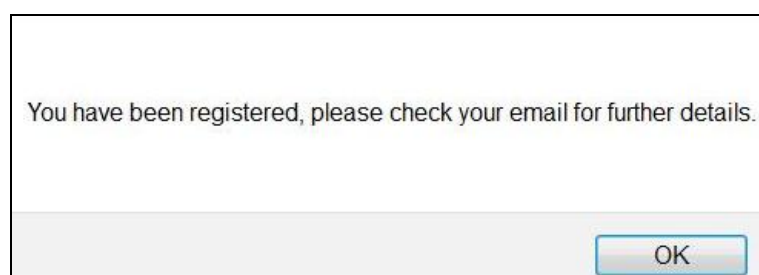


Figure 7. Registration Confirmation.

3 The User Interface

The user interface for VocBench is currently available in English (default) and Hindi. To switch to the Hindi interface, click on the small drop down box which you find at the top right corner of the entry page, and select Hindi (Figure 1, top left). In the future the interface will also be available in other languages.

The VB user interface is organized into two different areas (see Figure 4):

1. **Menu area** (Figure 8 [Menu] and Figure 9). This area is organized into three horizontal menu bars:
 - General settings (top menu bar)
 - Search (central menu bar)
 - Access to different modules (bottom menu bar)
 These bars are marked as [A], [B], and [C] respectively, in Figure 8.
2. **Content area** (Figure 8 [Content]), example: Concepts module

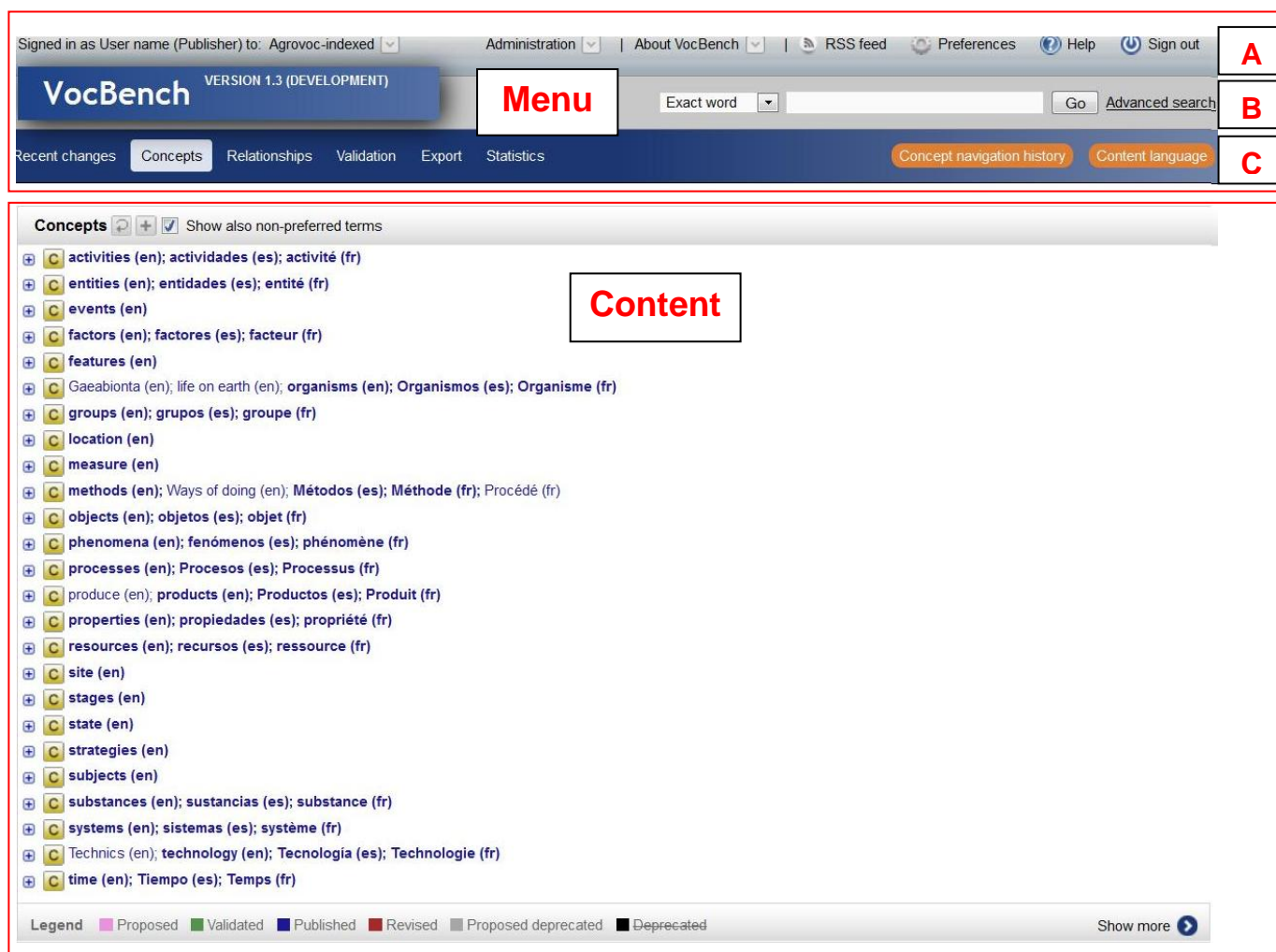


Figure 8. VB User Interface, Concepts Module: Menu area and Content area.

3.1 Menu area

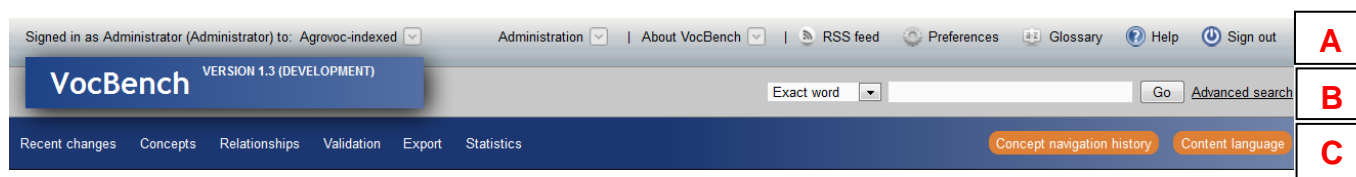


Figure 9. VocBench Interface: Menu area.

3.1.1 General settings

The top bar in the menu area is dedicated to the following General settings:

- User name (Figure 10, [1])
 - Signed in as: Shows the account name used by the user for login.
- Role (Figure 10, [2])
 - Shows the role (in brackets) played by the user in the workflow, e.g. Publisher, (see Sec. 6).
- Data set (Figure 10, [3])
 - Shows the data set currently in use (e.g. Agrovoc-indexed). To change to another data set, click on arrow and select, e.g. Biotechglossary



Figure 10. General settings: User name [1], User role [2], Data set [3].

- Administration (Figure 11, [4])
 - Gives access to the list of users and groups registered to VocBench.
Note: Only available to Publishers and Administrators.
- About VocBench (Figure 11, [5])
 - Gives access to information about
 - Partners: list of partners collaborating in the development of VocBench.
 - Contact us: Opens a web form to contact VocBench Team by email.
- RSS feed (Figure 11, [6])
 - Allows users to subscribe an RSS feed to be constantly informed about changes in a specific data set (i.e., create/edit/delete concept/terms/relationships), and in user accounts and groups (new user registrations, change of rights).

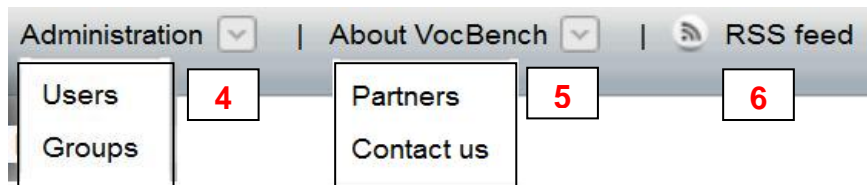


Figure 11. General settings: Administration, About VocBench, RSS feed.

- Preferences [7] (see Figure 12)
 - Allows users to manage account information, to set preferences regarding user interface and language content (for detailed information, see Sec. 4).
- Help [8]
 - Links to this document, published on the FAO website.
- Sign out [9]
 - To sign out of VocBench.



Figure 12. General settings: Preferences, Help, Sign out.

3.1.2 Search

Search facilities are always available to all users (independently of VocBench module opened) from the central menu bar [B] of the menu area (Figure 13):

- Simple search
 - Type in the term or phrase you are looking for (choosing one of the options from the drop down list), and click **GO**. For detailed description, see Sec. 5.1.
- Advanced search
 - Opens an advanced search interface that allows use of more specific search criteria. For detailed description, see Sec. 5.2.

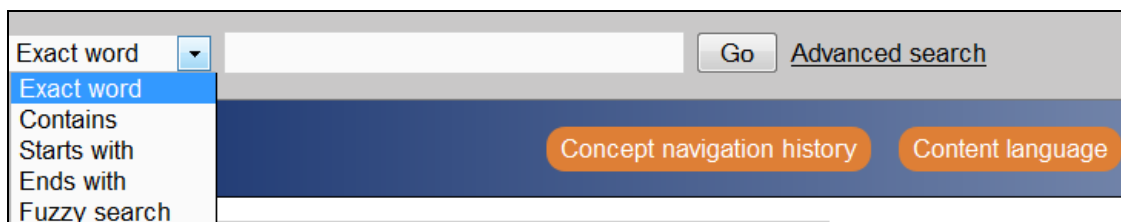


Figure 13. Menu area [B]: Search area.

3.1.3 Access to content: All modules

The list of VocBench modules available to users, depending on their roles, is shown in the bottom menu bar [C] (Figure 14).

Please find below a brief introduction to the content of all available modules (see Figure 6), and to the role of users who are allowed to access them.

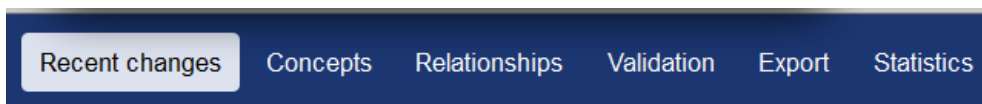


Figure 14. Menu area [C]: Access to Content: All Modules.

1. Recent changes – Access to all users
 - Lists recent changes applied to VocBench such as modifications applied to terms and concepts, user registrations, etc. (for detailed information, see Sec. 7).
2. Concepts – Access to all users
 - Shows concept hierarchy that is browsable as well as detailed information on concepts and terms.
 - This module is used to manage concepts, terms, their relationships, and more (see Sec. 8).
3. Relationships – Access to Publishers and Administrators only
 - Shows all the relationships available for use in the ontology, together with their definitions.
 - This section is used to manage relationships. Actual instances of relations are visualized in the Concepts module.
4. Validation – Access to Validators, Publishers and Administrators
 - Shows all proposed changes applied to the concept schema to be validated.
5. Export – Access to all users
 - To export the concept schema in various formats.
6. Statistics – Access to Ontology editors, Validators, Publishers and Administrators
 - To view information on the amount and type of use on VocBench.

Two more buttons, **Concept navigation history** and **Content language**, are available in the bottom menu bar [C] of the menu area (see Figure 13, and Figure 15):

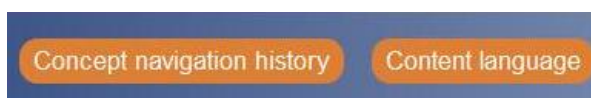


Figure 15. Menu area [C].

1. Concept navigation history – Access to all users
 - The navigation history shows the list of concepts navigated during the current session (for detailed information, see Sec. 5.3).
2. Content language – Access to all users
 - To select the languages for display when viewing and searching concepts, relationships, etc., during the current session only (Figure 16).

Note: To make your language preferences available to future sessions too, use the link **Preferences** (see Sec. 4).

Select languages to display

Use this area to select languages you wish to see when viewing **concepts**, **categories** and **relationships** and to **use in searching** in your **current session**.

By default in every next login, the content language will be set to the users languages. All the changes in the content language will be valid for the current session only.

You will **always see only in user languages** when viewing **terms** associated with concepts and categories. To see in all the language, use the preferences area to check "Show also non selected languages" under "Administration" at top of the page.

+ Add new language

Order	Language	Note	Code	
1	<input checked="" type="checkbox"/> english	english	en	<input type="text"/> -
4	<input checked="" type="checkbox"/> español	spanish	es	<input type="text"/> -
6	<input checked="" type="checkbox"/> français	french	fr	<input type="text"/> -
7	<input type="checkbox"/> arabic	arabic	ar	<input type="text"/> -
8	<input type="checkbox"/> 中文	chinese	zh	<input type="text"/> -
9	<input type="checkbox"/> русский	russian	ru	<input type="text"/> -
10	<input checked="" type="checkbox"/> português	portuguese	pt	<input type="text"/> -
12	<input type="checkbox"/> latin	latin	la	<input type="text"/> -
13	<input checked="" type="checkbox"/> cesky	czech	cs	<input type="text"/> -
14	<input checked="" type="checkbox"/> lao	lao	lo	<input type="text"/> -
15	<input type="checkbox"/> persian	also known as farsi.	fa	<input type="text"/> -
16	<input checked="" type="checkbox"/> 日本語	japanese	ja	<input type="text"/> -
17	<input checked="" type="checkbox"/> ไทย	thai	th	<input type="text"/> -
18	<input checked="" type="checkbox"/> हिन्दी	hindi	hi	<input type="text"/> -

☐ Select all
 ☐ Clear all
 Save
Cancel

Figure 16. Content Language.

3.2 Content area

In the content area of the user interface [Content] (Figure 8), the content displayed depends on the selected module (see Sec. 3.1.3).

4 Preferences

Link **Preferences** is available from the top menu bar. After clicking on **Preferences**, five boxes are displayed, showing the following information (Figure 17):

- Details (of user account)
- User language (of the data)
- Pending language request
- User ontology
- Pending ontology request

Note: Preferences will be available in current and future sessions.

Signed in as Administrator (Administrator) to: Agrovoc-indexed | Administration | About VocBench | RSS feed | **Preferences** | Help | S

VocBench VERSION 1.3 (DEVELOPMENT)

Exact word [] Go Advance

Recent changes Concepts Relationships Validation Export Statistics Concept navigation history Content la

Preferences

Details		User language	User ontology
Login	Administrator	English Spanish French German	Agrovoc Products Agrovoc-indexed Biotechglossary
New password			
Confirm password			
Email	agrovoc@gmail.com		
New email			
Confirm email			
Ontology	Agrovoc-indexed		
Set your landing page	Concepts		
Language of the interface	English (en)		
<input type="checkbox"/> Show URI	<input type="checkbox"/> Show also non-preferred terms		
<input checked="" type="checkbox"/> Show also non selected languages	<input checked="" type="checkbox"/> Hide deprecated terms and concepts		
Save Clear			

Pending language request: Italian

Pending ontology request:

Figure 17. Personal Preferences in VB.

4.1 Details (of user account)

In **Preferences** users may control personal information:

- Login
 - User name. Note: The user name cannot be changed!
- New password / Confirm password
 - You may change your password in this field, and
 - need to confirm your new password.

- Email
 - Shows your current email address
 - New email: You may change your email in this field, and
 - Confirm new email address.
- Ontology
 - In case you are an editor of more than one ontology, you can state here the one you want to start with.
- Landing page in VocBench
 - To set the VocBench module you want to visualize after logging in.
- Language of interface
 - To set the language used for the VocBench interface.
Note: Currently the user interface is only available in two languages: English (default) and Hindi.
- Show URI
 - Corresponds to the check box **Show URI** available in the **Concepts** module.
- Show also non-preferred terms
 - Corresponds to the check box **Show also non-preferred terms** available in the **Concepts** module.
- Show also non-selected languages
 - Generally, concepts in the concept hierarchy are only shown in the user language(s) (see Sec. 4.2). By selecting this option, all terms in all languages are shown, regardless the language(s) for which the users have approval.
- Hide deprecated terms and concepts
 - The concept hierarchy will show only concepts and terms with the following status: proposed, validated, published, revised. For detailed information about statuses in VocBench, see Sec. 6.1.

4.2 User Language

This part shows the list of languages for managing data for which users already have approval (see Figure 17).

In case users want to remove any language(s), they can select the appropriate language(s), and click on the **[-]** button.

If users want to manage concepts/terms in a new language, they have to click on the **[+]** icon, select from the drop down list the language, and click on **Add**.

After this step, the selected language will be added to **Pending language request**.

The VocBench Administrator will receive an email about the users' language request.

After approval, users will be notified by email.

Note: The language of the data may also be selected by using the button **Content language** (see Sec. 3.1.3). In that case the change will be valid in the current session only.

4.3 Pending language request

This field shows the new language requested by the users, and waiting for the Administrator's approval (see Figure 17).

After approval it will be removed from this list and moved up to the list of user languages.

The users will be notified by email, and then may add, edit, or delete concepts and terms in those languages.

4.4 User ontology

This area shows the list of ontologies (or data sets) for which users already have access (see Figure 17).

If users want to remove any ontology, they can select the appropriate ontology and click the **[-]** button.

If users want to manage a new ontology, they can click on the **[+]** icon, select the available ontology, and click on **Add**.

After this step, the selected ontology will be added to **Pending ontology request**.

The VocBench Administrator will receive an email about the user's ontology request.

After approval, users will be notified by email.

4.5 Pending ontology requests

This part shows the ontology requested by the users, and waiting for the Administrator's approval.

After approval it will be removed from this list and moved up to the user ontology list. Users will be notified by email, and then will have access to the new ontology.

5 Search

Search functionalities are always available, and to all users. VocBench allows you to perform a simple search and an advanced search. Both are case insensitive.

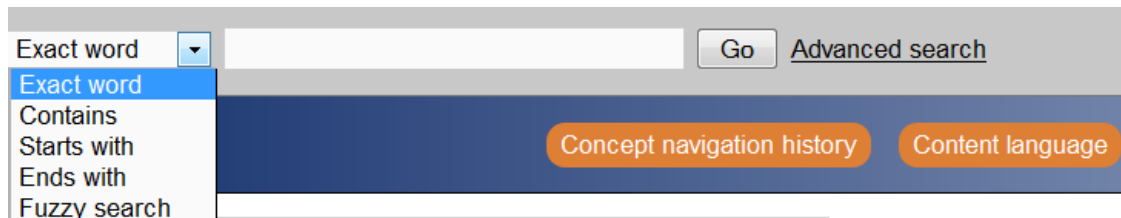


Figure 18. Search Options.

5.1 Simple search

Users may choose one of the following search options (Figure 18):

1. Exact word (default)
 - With this option you will retrieve the concepts labelled by terms (in any language) matching exactly the word typed in.
Example: Figure 19 shows the results of a search for “palm”, when English is the only language selected.
2. Contains
 - With this option you will retrieve the concepts labelled by terms (in any language) that contain the word (or string) typed in.
Example: A search for “palm” returns also the terms “Acer palmatum”, “oil palms”, “ascorbyl palmitate”.
3. Starts with
 - With this option you will retrieve the concepts labelled by terms (in any language) that start with the search string typed in. This search also retrieves composed terms that contain words starting with the string typed in.
Example: In Figure 20 you can see the results of a search for “tomato”.
4. Ends with
 - With this option you will retrieve the concepts labelled by terms (in any language) that end with the word typed in.
5. Fuzzy search
 - This option retrieves concepts labelled by terms that are *similar* to the one you typed in.
For example, search terms such as "communicatione" or "communicatio" will give also result for "communication".

Signed in as Administrator (Administrator) to: Agrovoc-indexed Administration | About VocBench | RSS feed Preferences Help

VocBench VERSION 1.3 (DEVELOPMENT)

Exact word palm Go Advanced search **Last results**

Recent changes Concepts Relationships Validation Export Statistics Concept navigation history Co

Search results

Concept	Last update date
African fan palm (en); Borassus aethiopum (en); Borassus flabellifer aethiopicum (en)	12-08-2009 09:08:27
African oil palm (en); Elaeis guineensis (en); oil palm (en)	06-12-2010 05:30:47
American oil palm (en); Corozo oleifera (en); Elaeis melanococca (en); Elaeis oleifera (en)	04-08-1997 18:00:00
Areca catechu (en); areca palm (en); betel palm (en)	13-08-2009 10:41:01
Areaceae (en); palm trees (en); Palmaceae (en); Palmae (en); palms (en)	17-09-2008 23:33:31
Arecastrum romanzoffianum (en); Cocos romanzoffianum (en); Queen palm (en); Syagrus romanzoffianum (en)	23-04-2010 09:28:09
areng palm (en); arenga palm (en); Arenga pinnata (en); Arenga saccharifera (en); black fiber palm (en)	24-05-2010 04:39:32
Assai palm (en); Euterpe oleracea (en)	23-04-2010 09:41:44
Astrocaryum murumuru (en); murumuru palm (en)	23-04-2010 10:01:23
Attalea funifera (en); Bahia piassava palm (en)	05-11-1998 02:09:00

1 of 2

Figure 19. Search result with search option 'Exact word'.

Signed in as Administrator (Administrator) to: Agrovoc-indexed Administration | About VocBench | RSS feed Preferences Help

VocBench VERSION 1.3 (DEVELOPMENT)

Starts with tomato Go Advanced search **Last results**

Recent changes Concepts Relationships Validation Export Statistics Concept navigation history Co

Search results

Concept	Last update date
Cherry tomatoes (en)	24-02-2009 09:46:20
Cyphomandra betacea (en); Tree tomato (en)	16-07-2009 09:23:32
Lycopersicon esculentum (en); Lycopersicon lycopersicum (en); Solanum lycopersicum (en); tomato (plant) (en)	23-04-2010 04:21:29
Tomato mosaic tobamovirus (en); Tomato mosaic virus (en)	23-10-1997 18:00:00
Tomato spotted wilt virus (en)	30-03-2009 10:35:35
Tomato yellow leaf curl geminivirus (en); Tomato yellow leaf curl virus (en)	05-03-2009 07:21:21
Tomatoes (en)	05-11-1998 02:09:00

1 of 1

Figure 20. Search result with search option 'Starts with'.

Note: Clicking on **Last Results** (next to 'Advanced search'), will display the results of your last search.

5.2 Advanced search

Clicking on **Advanced search**, will display a detailed search form (Figure 21).

By default, the search is done across the languages set in **Preferences**, also shown in **Search in these language(s)**. To change search languages, click on the **[+]** or **[-]** icon to add or remove languages.

Figure 21. Advanced Search Interface.

An advanced search may be performed by using the same search options described in Sec. 5.1 for simple search. Moreover, two more search options are available:

1. **Include notes:** By selecting this option, also content of editorial notes, scope notes, and definitions is included in the search.
2. **Search preferred terms only:** Selecting this option, will restrict the search to terms marked as 'preferred term'.

In the **Advanced search options** area, further constraints to the search criteria may be applied.

5.2.1 Search for relationships between concepts

You may search for relationships between concepts in two ways:

1. Specifying only the relationship.

Click on the **Browse** button (Figure 22) to open the **Relationship browser**, select the relationship you want to search for, and click on **Submit**. To perform the search, click on the **Search** button.

In **Error! Reference source not found.14**, the relationship **Produces** was selected in the **Relationship browser**. The search result consists of all pairs of concepts being linked by that relationship (Figure 23).

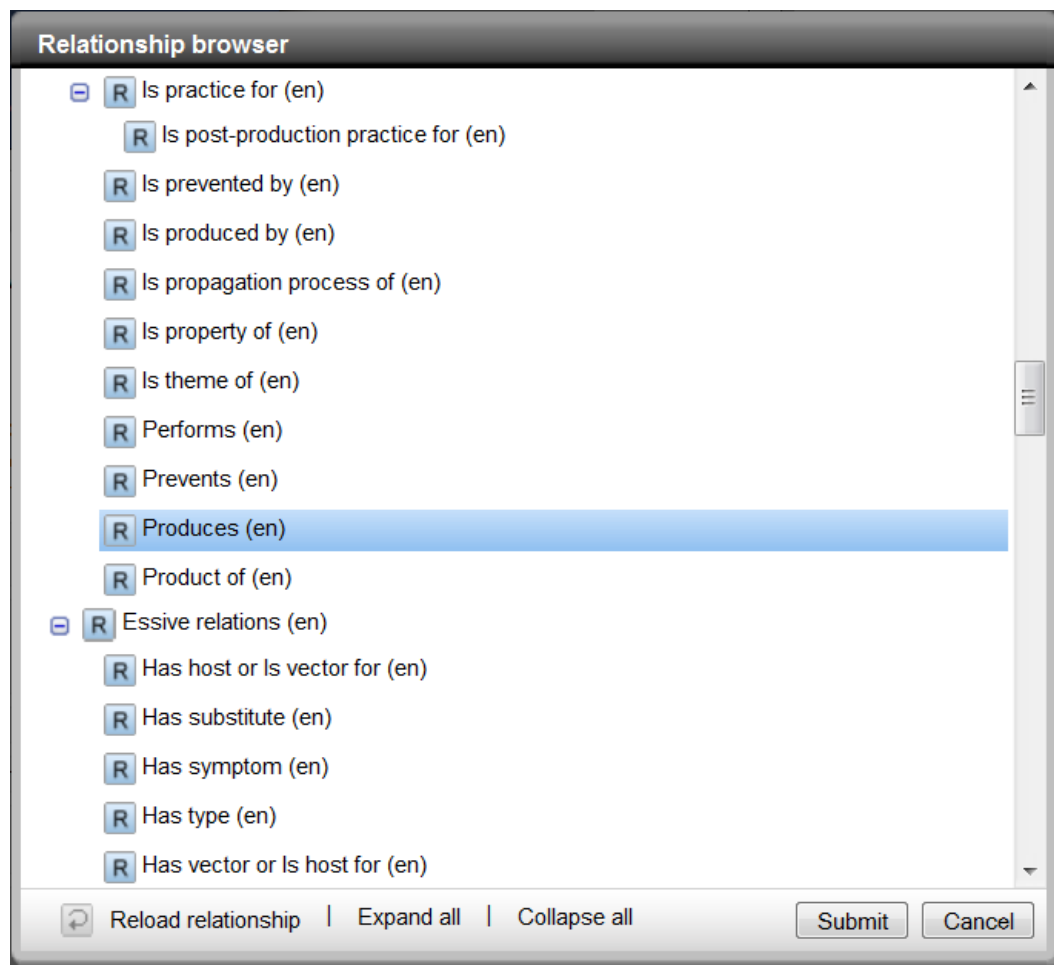


Figure 22. Advanced search: Search by Relationship.

VocBench VERSION 1.3 (DEVELOPMENT)

Starts with Go [Advanced search](#) [Last results](#)

Recent changes Concepts Relationships Validation Export Statistics [Concept navigation history](#) [Content language](#)

Search results

Concept	Relationship	Concept
Agricultural machinery (industry) (en); Agricultural machinery industry (en); Machinery industry (en)	Produces (en)	Appliances (en); Equipment (en) ; Implements (en); Installations (en); Instruments (en); Machinery (en); Tools (en)
Alcoholic fermentation (en); Ethylic fermentation (en)	Produces (en)	Alcoholic beverages (en) Ethanol (en) ; Ethyl alcohol (en)
Allium ampeloprasum (en) ; Allium porrum (en)	Produces (en)	Leeks (en)
Allium ascalonicum (en)	Produces (en)	Shallots (en)
Allium cepa (en)	Produces (en)	Onions (en) ; Spring onions (en)
Allium fistulosum (en)	Produces (en)	Japanese bunching onions (en) ; Welsh onions (en)
Allium sativum (en)	Produces (en)	garlic (en)
Allium schoenoprasum (en)	Produces (en)	chives (en)
Amanita (en)	Produces (en)	Amanitin (en)
American cranberry (en); Vaccinium macrocarpon (en)	Produces (en)	Cranberries (en)

1 of 19

Figure 23. Results of Advanced Search: Search by Relationship.

2. Searching by both relationship AND concept.

Select the relationship in the **Relationship browser** as described above. In the search box type the word you want to search for, and click on the **Search** button.

Figure 24 shows a search for preferred terms only, by word **virus** AND by relationship **Causes**. The results are displayed in Figure 25.

Exact word

☐ Include notes ☒ Search preferred terms only

Advanced search options

Relationship	<input type="text" value="Causes (en)"/>	<input type="button" value="Browse"/>	<input type="button" value="X"/>
Term codes	Repository <input type="text" value="--None--"/>		
	Code <input type="text"/>		
Status	<input type="text" value="--All--"/>		
Classification scheme	<input type="text" value="--Select--"/>		
Concept attribute	<input type="text"/>	<input type="button" value="+"/>	
Term attribute	<input type="text"/>	<input type="button" value="+"/>	

Search in these languages

English

Figure 24. Advanced Search: Search (preferred terms only) by Relationship AND Word.

VocBench VERSION 1.3 (DEVELOPMENT)

Exact word [Advanced search](#) [Last results](#)

Recent changes Concepts Relationships Validation Export Statistics

Search results

Concept	Relationship	Concept
<input type="checkbox"/> African horse sickness virus (en)	<input type="checkbox"/> Causes (en)	<input type="checkbox"/> African horse sickness (en)
<input type="checkbox"/> African swine fever virus (en)	<input type="checkbox"/> Causes (en)	<input type="checkbox"/> African swine fever (en)
<input type="checkbox"/> Aujeszky virus (en); Pseudorabies virus (en)	<input type="checkbox"/> Causes (en)	<input type="checkbox"/> Aujeszky's disease (en); Pseudorabies (en)
<input type="checkbox"/> Banana bunchy top virus (en)	<input type="checkbox"/> Causes (en)	<input type="checkbox"/> Bunchy top disease (en)
<input type="checkbox"/> Bluetongue virus (en)	<input type="checkbox"/> Causes (en)	<input type="checkbox"/> Bluetongue (en)
<input type="checkbox"/> Borna disease virus (en)	<input type="checkbox"/> Causes (en)	<input type="checkbox"/> Borna disease (en)
<input type="checkbox"/> Bovine leukaemia virus (en); Bovine leukosis virus (en); Bovine oncovirus (en)	<input type="checkbox"/> Causes (en)	<input type="checkbox"/> Bovine leukosis (en)
<input type="checkbox"/> Carre's disease virus (en); Distemper virus (en)	<input type="checkbox"/> Causes (en)	<input type="checkbox"/> Carre's disease (en)
		<input type="checkbox"/> Distemper (en)
		<input type="checkbox"/> Canine distemper (en)

1 of 2

Figure 25. Results of Advanced Search: Search by Concept AND Relationship.

5.2.2 Search for Term codes

This type of search is useful when you know the term code (in Figure 26 you can see the term codes currently available in AGROVOC), to find the concept to which the term is associated.

In order to search for a concept with given term code, select the **Repository**, e.g. **Has AGROVOC term code** (Figure 26), then enter the code in the **Code** search box, e.g. **7698** (Figure 27), and click on **Search**.

The image shows a web interface titled "Advanced search options". It contains several input fields for search criteria: Relationship, Term codes, Status, Classification scheme, Concept attribute, and Term attribute. The "Term codes" section is expanded, showing a "Repository" dropdown menu with a list of options. The options are: "--None--", "Has AGROVOC term code (en)", "Has fishery 3 alpha code (en)", "Has taxonomic code (en)", "Has ASFA code (en)", "Has FAO term code (en)", "Has ASC code (en)", "Has code in the schema FAO Priority Area (en)", "Has ISO 3 country code (en)", "Has UNDP country code (en)", and "Has ISO 2 country code (en)". The "Has AGROVOC term code (en)" option is highlighted in blue. There is a "Browse" button and a trash icon to the right of the dropdown.

Figure 26. Advanced Search. Search for Term Codes: Select Repository.

The image shows a web interface for searching by term code. It has a "Term codes" section with a "Repository" dropdown menu set to "Has AGROVOC term code (en)" and a "Code" input field containing the value "7698".

Figure 27. Advanced Search: Search for Term Code.

5.2.3 Search for Status

This option allows you to retrieve all terms/concepts in the selected status (for explanation about term/concepts status, see Sec. 6.1). In order to use this search option, select the term/concept status from the drop down list, e.g. **Proposed deprecated**, (Figure 28), and click on the **Search** button.

The image shows a web interface for searching by status. It has a "Status" dropdown menu with a list of options: "--All--", "Proposed by guest", "Proposed", "Revised by guest", "Revised", "Proposed deprecated", "Deprecated", "Validated", "Published", and "Deleted". The "Proposed deprecated" option is highlighted in blue. There are also input fields for "Classification scheme", "Concept attribute", and "Term attribute".

Figure 28. Advanced Search: Search for Status.

5.2.4 Search for Classification scheme

- Currently not available.

5.2.5 Search for Concept attribute

- To search for concepts having a given value for the selected attribute.
- Use this search option to find for example concepts belonging to a specific subvocabulary of concepts (Figure 29). Click on the **[+]** icon to open the list, and select the desired concept attribute, e.g. ***Is part of subvocabulary***.

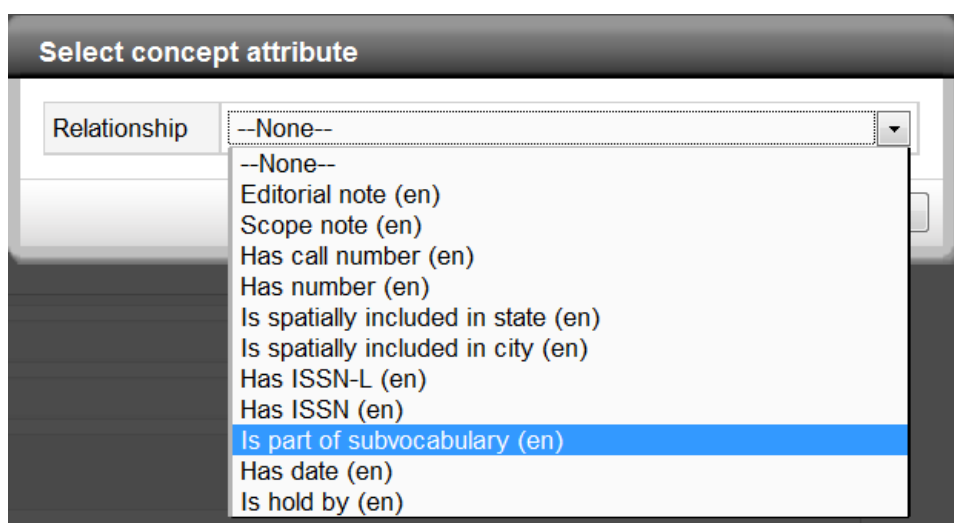


Figure 29. Advanced Search: Search for Concept Attribute.

Example: Search for Fishery related concepts (Figure 30): After selecting ***Is part of subvocabulary*** from the drop down list, a new window opens where to select ***Fishery related term***.

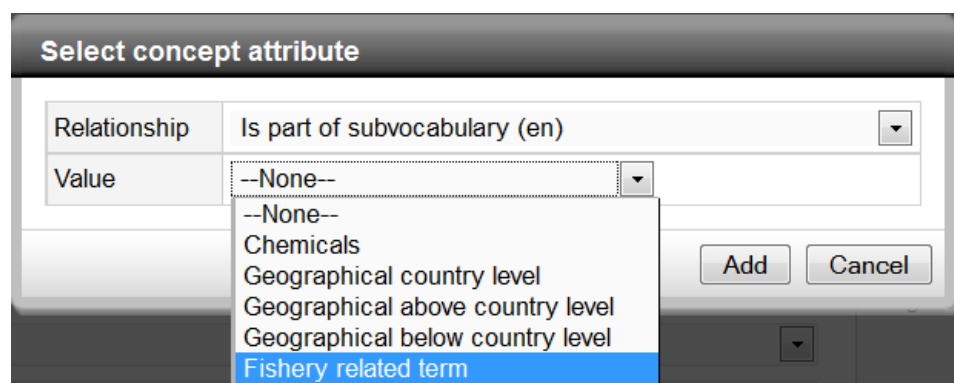


Figure 30. Advanced Search: Search for 'Fishery related term'.

5.2.6 Search for Term attribute

This search option allows you to search for concepts whose terms have a given attribute value. For example, in AGROVOC, you may use this search option to find concepts whose terms belong to a specific subvocabulary of terms (Figure 31). Click on the **[+]** icon to open the list, and select the desired term attribute, e.g. ***Has term type***.

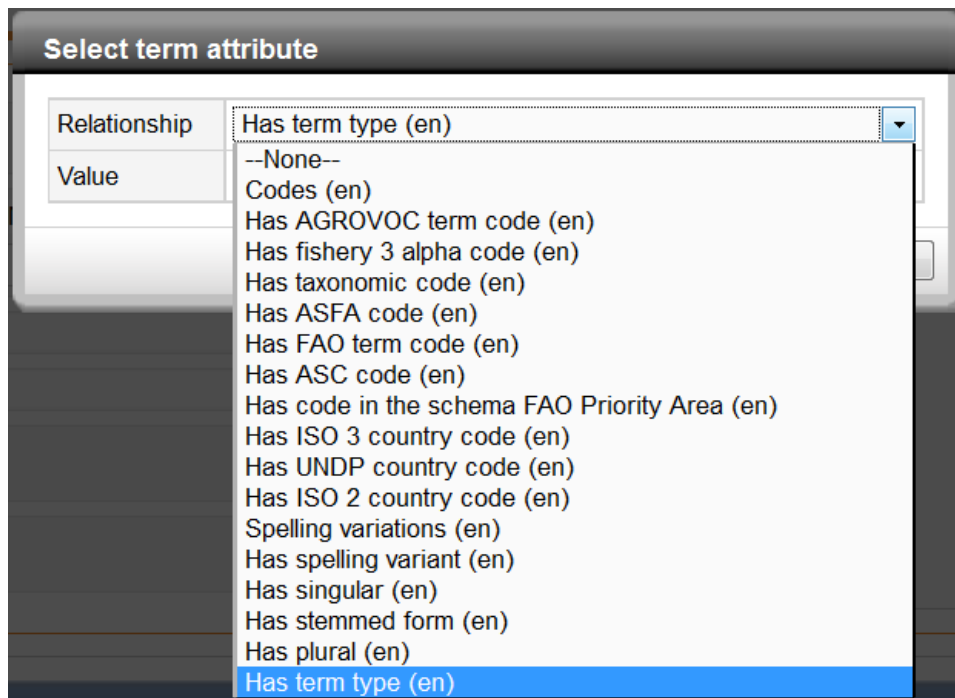


Figure 31. Advanced Search: Search for Term Attribute.

Figure 32 shows a search for common names of plants: After selecting ***Has term type***, a new window opens where to select the value ***common name for plants***.

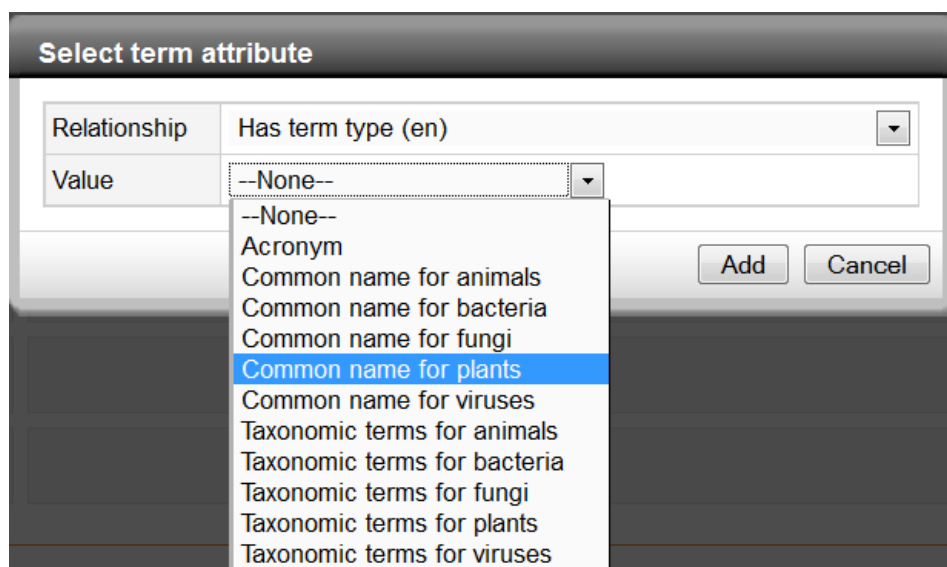


Figure 32. Advanced Search: Search for 'Common name for plants'.

5.3 Concept navigation history

When clicking on the **Concept navigation history** button (Figure 18), a window opens which displays the list of concepts (depending on the language selection) navigated during the current session, indicating date and time. In the following example (Figure 33), all languages were selected.

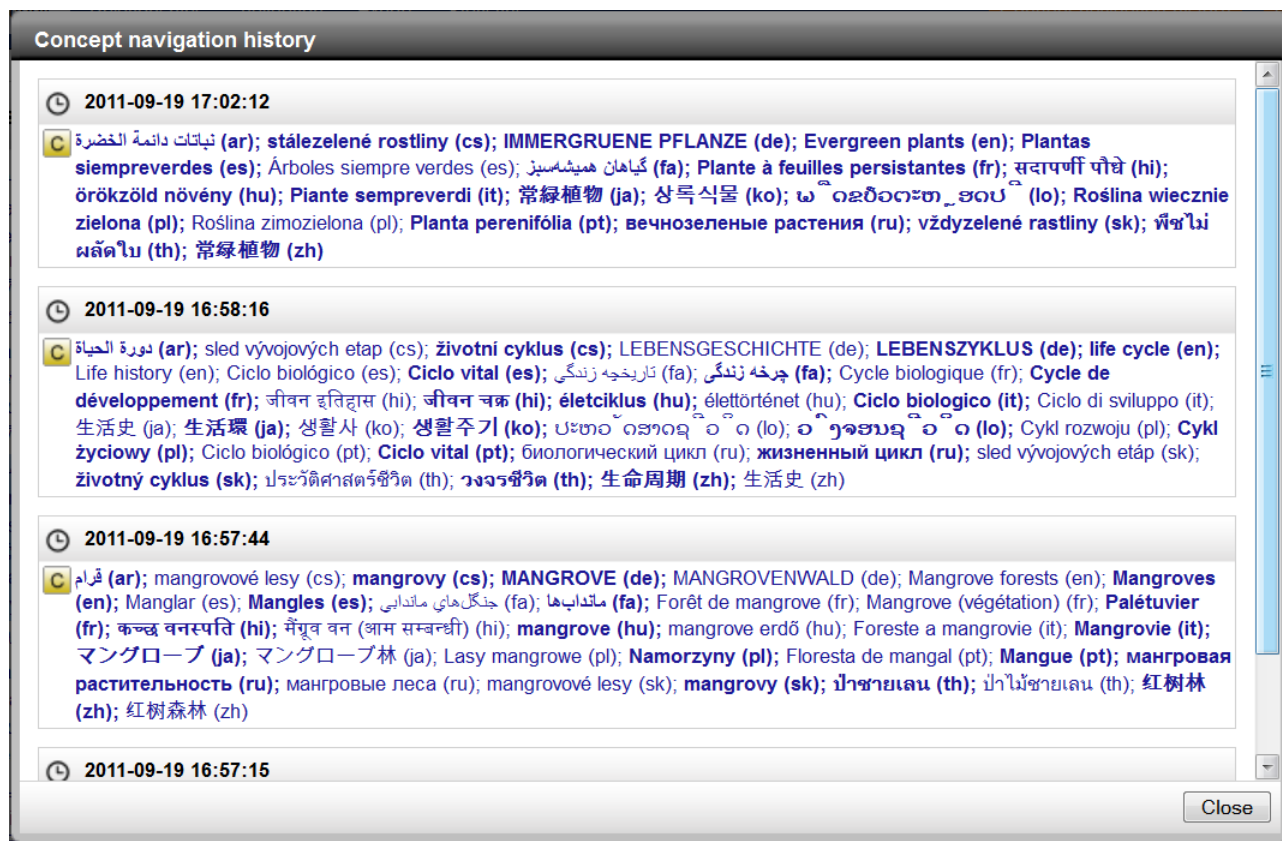


Figure 33. Concept Navigation History.

6 User rights and roles, element status and workflow

VocBench (VB) implements a formal workflow, where users contributing to a given concept scheme are assigned one (or more) role(s). By assigning elements in the concept scheme a status, the entire editing flow is described as a formal process. This is the key mechanism to allow for distributed and collaborative editing of concept schemes. In the following we first describe statuses of terms and concepts, then we describe the various roles implemented in the VB workflow.

People dealing with VB may play different roles in the workflow, e.g., Editor or Validator, and their work is organized into a workflow. In the AGROVOC workflow, terms (concepts, relations) are first suggested as draft, then revised, and finally approved and published.

In order to make such a workflow possible, a notion of element (terms, concepts, ...) status is needed (which is based on the notion of rights on actions, which we do not treat in detail now).

6.1 Status of terms and concepts

Terms and concepts have a **status**, corresponding to their status of approval in the workflow. Possible statuses are:

1. Proposed
2. Validated
3. Published
4. Revised
5. Proposed deprecated
6. Deprecated

Proposed. A registered user, e.g. Term Editor, has proposed a new concept or term. The term or concept is drafted, and not yet approved.

Validated. A validated term or concept has been approved by a Validator. Only after reviewing by a Publisher, it will become published.

Published. A validated change has been approved and confirmed by a Publisher. Only published terms and concepts are included in the public version of the schema.

Revised. A registered user has made a revision, e.g. changed a term, or a term relationship.

Proposed Deprecated. A term or concept gets status 'proposed deprecated' when a registered user has proposed to remove it. The deletion needs to be approved by a Validator.

Deprecated. A term or concept is deprecated when its deletion has been approved by a Validator. The term or concept is approved as outdated.

The legend for the status of concepts and terms is always visible at the bottom of the Concepts and Relationships modules (see Figure 34).



Legend ■ Proposed ■ Validated ■ Published ■ Revised ■ Proposed deprecated ■ Deprecated

Figure 34. Legend.

6.2 User roles

VocBench includes explicit management of workflow. Possible roles in the workflow are the following:

1. Term Editor
2. Ontology Editor
3. Validator
4. Publisher
5. Administrator

6.2.1 Term Editor

Term Editors are user of VocBench with the most restricted editing rights. They are usually terminologist by background.

Term Editors may access to following modules:

- Recent changes
- Concepts module
- Export module

In Concepts module, Term Editors may perform the following actions in their user language(s) only:

- Add, edit and delete terms
- Add, edit and delete relationships between terms, and any other piece of information for terms
- Add, edit, delete concepts
- Add, edit, and delete relations between concepts, and any other piece of information for

All actions performed by a Term Editor get status **Proposed**, and need to be approved by a Validator.

6.2.2 Ontology Editor

Ontology Editors are more experienced terminologists and thesaurus editors, and have all the rights of Term Editors.

Ontology Editors have access to the following VB modules:

- Recent changes
- Concepts
- Export
- Statistics

In Concepts module, Ontology Editors may perform the following actions in their user language(s) only:

- Add, edit and delete terms
- Add, edit and delete relationships between terms, and any other piece of information for terms
- Add, edit, delete concepts
- Add, edit, and delete relations between concepts, and any other piece of information for concepts (definitions, notes, attributes, images)

All actions performed by an Ontology Editor get status **Proposed**, and need to be approved by a Validator.

6.2.3 Validators

Validators are experts that can check and validate in their respective language(s) the work done by Term Editors and Ontology Editors. Validators have all the rights of Term Editors and Ontology Editors.

Validators may access the following modules of VocBench:

- Recent changes
- Concepts
- Validation
- Export
- Statistics

In Concepts module, Validators may perform all actions also allowed to Term Editors and Ontology Editors.

In the Validation module, Validators may accept or reject any actions that have been proposed or done by users. Those items then get status **Validated**.

6.2.4 Publishers

Publishers are those who have total control of the concept schema, and are responsible for publishing the validated entities.

Publishers have all the rights of Term Editors, Ontology Editors and Validators. The following further describes publishers' roles and privileges:

Publishers have access to the following modules of VocBench:

- Recent changes
- Concepts
- Relationships
- Validation
- Export
- Statistics

In Concepts module, Publishers may perform all actions allowed to Term Editors, Ontology Editors and Validators, plus the following ones:

- Move, link and unlink concepts.

In Validation module, they may perform the same actions as Validators.

- Permission on terms and concepts.
- Can validate changes applied by editors, and confirm changes applied by Validators.

In Relationships module, they may create new relationships between terms and concepts.

They ultimately approve a validated entry by a Validator, and change its status to **Published**.

- They can still reject validated entries, and thus remove them again from the model (in case of new proposals), or reset them to their previous status (in case of edit or proposal to delete).

Finally, Publishers have access to the link Administration, from where two menus are available:

- Users
- Groups

6.2.5 Administrators

Administrators have access to all modules of VocBench, and have overall rights!

7 Recent Changes Module

In this module you will see the list of all recent changes done in VocBench, starting with the most recent ones (Figure 35). For each action taken, you can see in six columns the following information:

1. Concept / Term / Relationship / Users: shows the element(s) that was/were changed.

C Concept **T** Term **R** Relationship

2. Change: shows the actual change of the element.
3. Old value: shows the previous state of the element.
4. Action: indicates which action was taken.
5. User: shows the user name of the person who performed the action.
6. Date: indicates exact date and time of the action.

VocBench

VERSION 1.3 (DEVELOPMENT)

Exact word

Go

Advanced search

Recent changes

Concepts

Relationships

Validation

Export

Statistics

Concept navigation history

Content language

Recent changes

▼

Apply filter

Concept / Term / Relationship / Users	Change	Old value	Action	User	Date
<div>C</div> Fusarium cubense (en) , Fusarium ciceris (en) , Fusarium oxysporum phaseoli (en) , Fusarium radialis lycopersici (en) , Fusarium cucumerinum (en) , Fusarium dianthi (en) , Fusarium elaeidis (en) , Fusarium oxysporum pisi (en) , Fusarium lycopersici (en) , Fusarium albedinis (en) , Fusarium medicaginis (en) , Fusarium vasinfectum (en) , Fusarium nivium (en) , Fusarium melonis (en) , Fusarium raphani (en) , Fusarium oxysporum (en) , Fusarium cepae (en)	<div>T</div> test (fa)	<div>T</div> امپوروم فازنولایفوزارایوم اکسی (fa)	term-edit	Administrator	01-09-2011 18:22:21
<div>C</div> genetics (en)	<div>T</div> జన్యుశాస్త్రం (en)		validation-rejected-term-cr	lavanya	01-09-2011 16:43:46
<div>C</div> genetics (en)	<div>T</div> జన్యుశాస్త్రం (en)		validation-rejected-term-cr	lavanya	01-09-2011 16:43:46
<div>C</div> genetics (en)	<div>T</div> జన్యుశాస్త్రం (en)		term-create	lavanya	01-09-2011 16:43:17
<div>C</div> genetics (en)	<div>T</div> జన్యుశాస్త్రం (en)		term-create	lavanya	01-09-2011 16:43:16
<div>R</div> Is new essive relationship of (en)	newessiverelationship_13148710		relationship-edit-inverse-pr	Johannsen	01-09-2011 13:41:48
<div>R</div> Is new essive relationship of (en)	<div>R</div> Is new essive relationship of (en)		relationship-create	Johannsen	01-09-2011 13:41:26
<div>R</div> new essive relationship (en)	<div>R</div> new essive relationship (en)		relationship-create	Johannsen	01-09-2011 11:56:48
<div>R</div> Is full name of (en)	<div>R</div> Is full name of (en)	<div>R</div> Full name of (en)	relationship-edit-label-edit	Johannsen	01-09-2011 11:40:56
<div>C</div> biology (en)	<div>R</div> Is studied by (en) <div>C</div> biologists (en)		concept-edit-relationship-c	Johannsen	01-09-2011 11:21:18
<div>Validator</div>	Description: Validators can check	Description: Validators can check	group-edit	Administrator	30-08-2011 05:05:58
<div>C</div> Ways of doing (en) , methods (en)	<div>T</div> methods (en)	<div>T</div> methods (en)	term-edit	Administrator	11-08-2011 10:25:47
<div>C</div> activities (en)	<div>T</div> activities (en)	<div>T</div> activities (en)	term-edit	Administrator	11-08-2011 10:25:12

Figure 35. VB Module: Recent Changes.

There is an **Apply filter** option at the top right of the **Recent changes** module (Figure 35).

The following specific filter options (Figure 36), facilitate the search for recent changes:

1. Filter by user: By default all registered users are selected. To modify the selection, uncheck the check box **All** (at the bottom of the list), and select the user(s) whose actions you want to view.
2. Filter by action: By default all possible actions are selected. To change the selection, uncheck the check box **All**, and select the actions you want to check.
3. Filter by date: You may choose a specific date or a period when actions were performed, by selecting **Today**, **This Week**, **This Month**, or entering a date **From To**.

To perform the search, click on **Submit**.

The screenshot shows the 'Recent changes filter' dialog box. It is divided into three main sections:

- Filter by user:** A list of users with checkboxes next to them. At the bottom, there is a checkbox labeled 'All' which is circled in red.
- Filter by action:** A list of actions with checkboxes next to them. At the bottom, there is a checkbox labeled 'All' which is circled in red.
- Filter by date:** Three radio buttons for 'Today', 'This Week', and 'This Month'. Below them are two date input fields labeled 'From' and 'To', both with the format 'DD/MM/YYYY'. A 'Clear Date' button is located below these fields.

At the bottom right of the dialog box are 'Submit' and 'Cancel' buttons.

Figure 36. Recent Changes Filter.

Other ways to be informed about changes:

- Subscribe to the RSS feed available at the top menu bar (see Sec. 3.1.1).
- To see individual concept or term changes: Use the **History** tabs that appear in the Concept/Term area of the Concepts module when you click on a concept (see Sec. 8.1.2)

8 Concepts module

The Concepts module is available to users playing all roles. It is used to:

- Browse and navigate the hierarchy of concepts
- See information attached to individual concepts and terms
- Add/edit/delete concepts and terms.

A concept is anything that is relevant to talk to in a given domain. A concept is represented by all terms, preferred and non-preferred, in all languages, to which it is associated. The entire representation of a concept often includes many terms. Both concepts and terms participate in relationships with other concepts and terms.

8.1 The user interface

When clicking on Concepts module, the list of top concepts of the concept hierarchy are displayed. In Figure 37, the top concepts are those of AGROVOC in English.

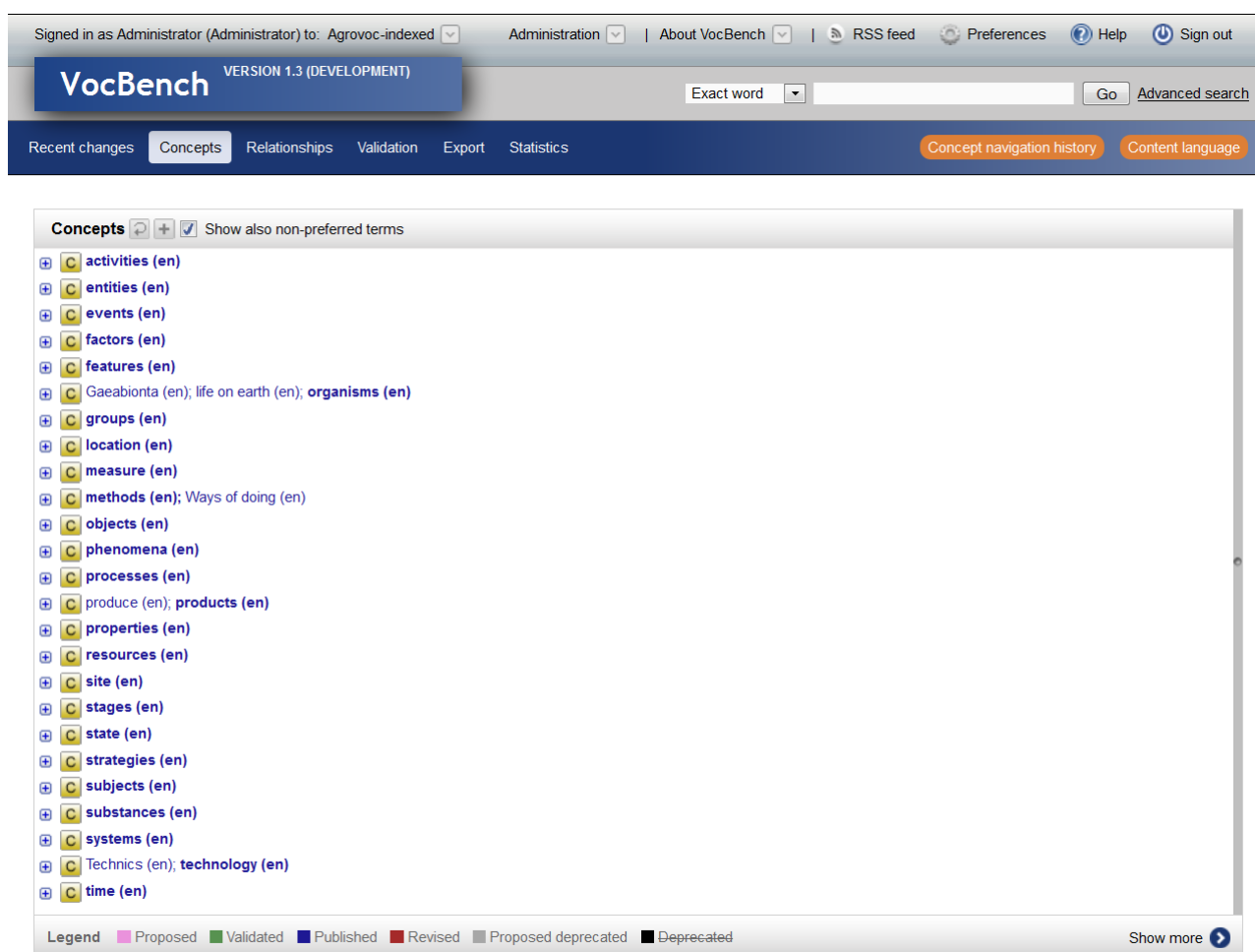


Figure 37. Concepts Module: Visualizing the Top Concepts of AGROVOC.

When clicking on any of the concepts in the concept hierarchy, the screen is organized into two parts, as shown in Figure 38: The entire hierarchy is shown in the left side [A] (Concept Hierarchy Area), while the information relevant to the selected concept is shown in the right side [B] (Concept/Term Area).

The screenshot displays the VocBench interface (VERSION 1.3 (DEVELOPMENT)). The top navigation bar includes links for Administration, About VocBench, RSS feed, Preferences, Help, and Sign out. The main navigation bar shows tabs for Recent changes, Concepts, Relationships, Validation, Export, and Statistics. The Concepts tab is active, showing a list of concepts in the left pane (Area A) and a detailed view of the selected concept in the right pane (Area B).

Area A: Concepts

- activities (en)
- entities (en)
- events (en)
- factors (en)
- features (en)
- Gaeabionta (en); life on earth (en); **organisms (en)**
- groups (en)
- location (en)
- measure (en)
- methods (en); Ways of doing (en)
- objects (en)
- phenomena (en)
- processes (en)
- produce (en); products (en)
- properties (en)
- resources (en)
- site (en)
- stages (en)
- state (en)
- strategies (en)
- subjects (en)
- substances (en)
- systems (en)
- Technics (en); technology (en)
- time (en)

Area B: Gaeabionta (en); life on earth (en); organisms (en)

Terms (3) | Definition (0) | Note (1) | Attribute (0) | Relationship (0) | History (0)

Language	Term
English (en)	organisms (Preferred) W
	Gaeabionta W
	life on earth W
Español (es)	Organismos (Preferred) W
Français (fr)	Organisme (Preferred) W
中文 (zh)	生物体 (Preferred) W
Русский (ru)	организмы (Preferred) W
Cesky (cs)	organismy (Preferred) W
Deutsch (de)	Lebewesen (Preferred) W
Bahasa Melayu (ms)	organisma W

Legend: Proposed (pink), Validated (green), Published (blue), Revised (red), Proposed deprecated (grey), Deprecated (black). Show more

Figure 38. Concept Hierarchy Area [A] and Concept/Term Area [B].

8.1.1 Concept Hierarchy area [A]

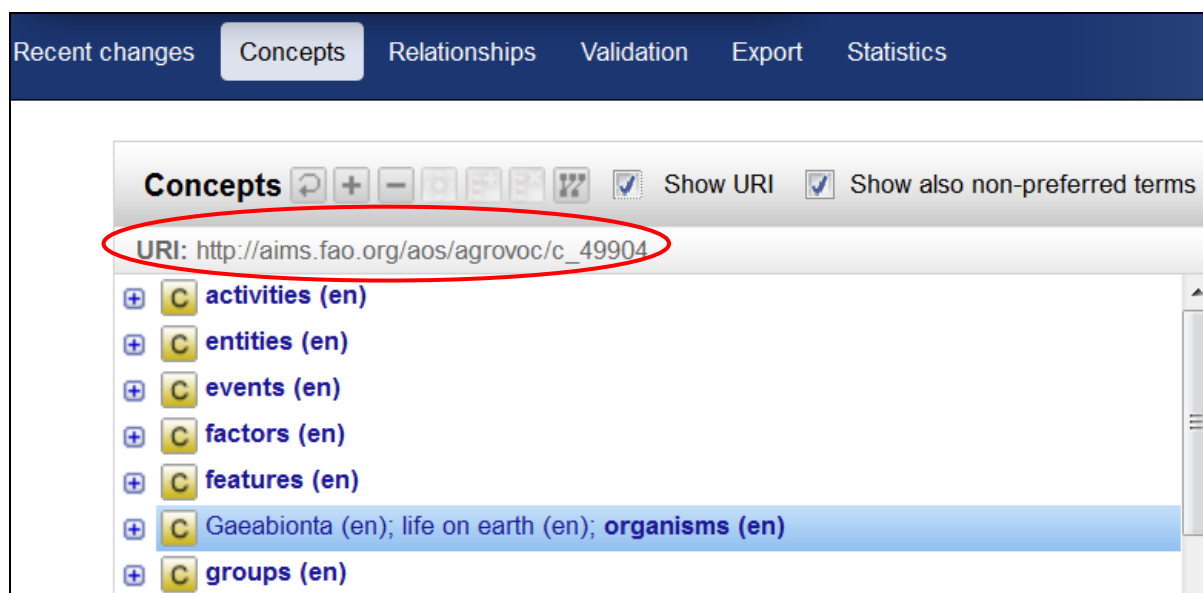






Figure 39. Buttons on Concept Hierarchy Area.

Starting from the left, there are a number of buttons with following functionalities (Figure 39):

- Reload concept 
 - Makes the screen refreshes, and reload the selected concept, or the entire hierarchy if no concept is selected.
- Add new concept 
 - To add a new concept to the hierarchy.
- Delete concept 
 - To delete the selected concept.
- View graph 
 - Opens a new window or tab with a graphical representation of the selected concept and its relations with other concepts (Figure 40).

Next to those buttons, there are two check boxes to select what to show in the concept hierarchy (Figure 39):

- Show URI
 - Shows the URI of the selected concept.
- Show also non-preferred terms
 - Preferred terms are displayed in bold, and non-preferred terms are shown next to them.

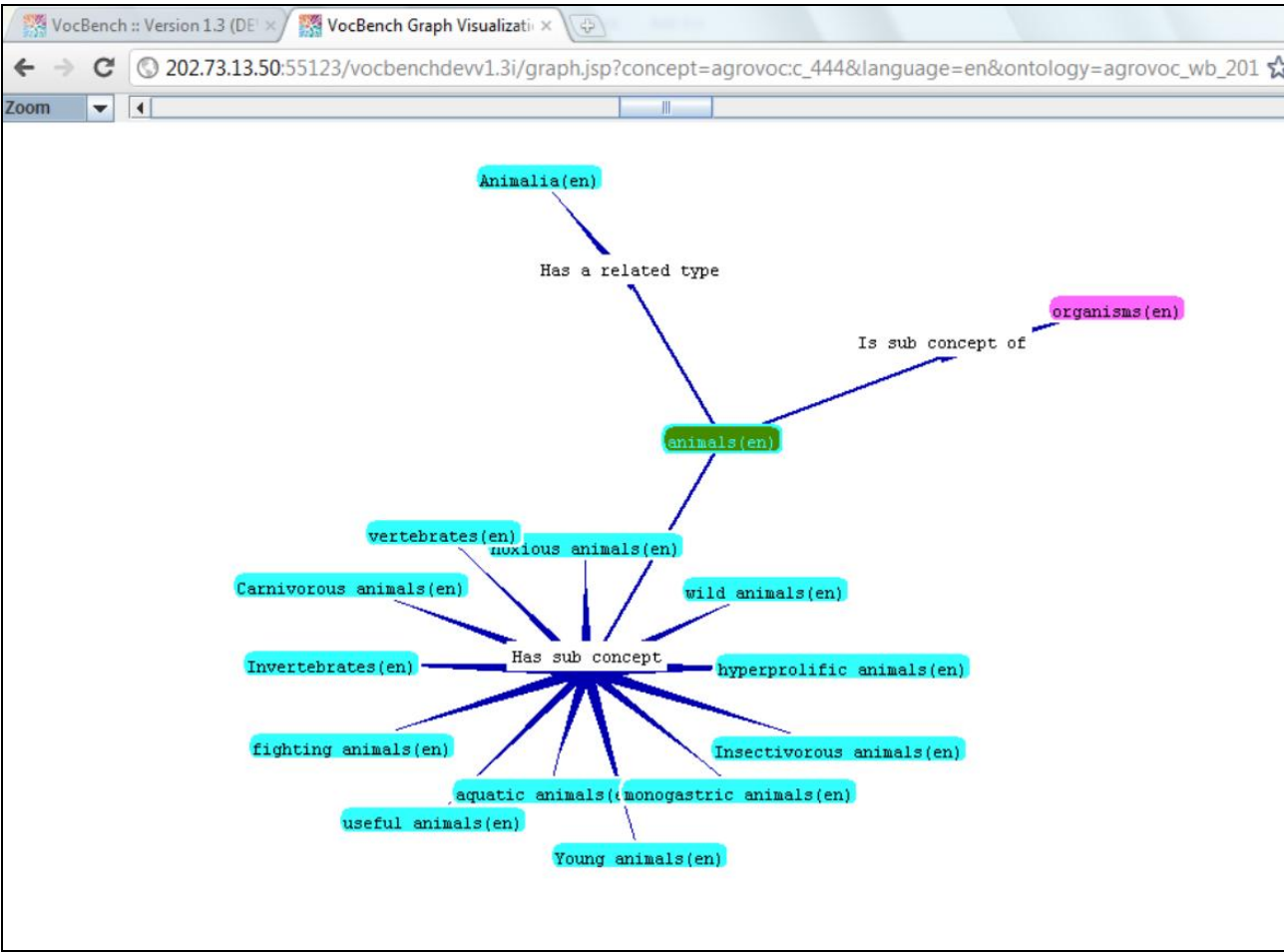


Figure 40. Graph Visualization of a Concept.

8.1.2 Concept/Term Area

The Concept/Term area [B] on the right part of the screen, shown in Figure 38, is organized in tabs, where users have access to all pieces of information about a selected concept.

Figure 41 shows the associated English terms for the concept **genetically modified organisms** (AGROVOC), and the different information tabs.

Genetically engineered organisms (en); **genetically modified organisms (en)**; GMO (en)

Terms (3) | Definition (1) | Note (1) | Attribute (0) | Relationships (3) | History (0) | Image (0) | Hierarchy

+ Add new term

Language	Term
English (en)	genetically modified organisms (Preferred)
	Genetically engineered organisms
	GMO

Figure 41. Concept/Term Area: Information Tabs.

The following tabs are available:

1. Tab Terms

- Shows all terms associated to that concept, in the languages selected.

Note: By selecting in **Preferences** the option **Show also non-selected languages** (see Sec. 4.1), all terms in all languages are shown, regardless the language(s) for which the users have approval.

2. Tab Definition

- Shows the definitions available for the selected concept.

3. Tab Note

- Shows available editorial and scope notes (Figure 42).

The screenshot shows the 'Note' tab interface. At the top, the concept name is displayed: 'Genetically engineered organisms (en); genetically modified organisms (en); GMO (en)'. Below this is a row of tabs: 'Terms (3)', 'Definition (1)', 'Note (1)', 'Attribute (0)', 'Relationships (3)', 'History (4)', 'Image (0)', and 'Hierarchy'. The 'Note (1)' tab is selected. Below the tabs is a section titled 'Add new notes' with a plus icon. Below this is a table with two columns: 'Notes' and 'Value'. The table contains one row with the note 'Editorial note' and the value 'Source: Glossary of Biotechnology for Food and Agriculture (FAO), 2001. (en)'. There are edit and delete icons next to the note.

Figure 42. Concept/Term Area: Note.

4. Tab Attribute

- Shows available attributes for the selected concept (Figure 43).

The screenshot shows the 'Attribute' tab interface. At the top, the concept name is displayed: 'Asia (en)'. Below this is a row of tabs: 'Term (1)', 'Definition (0)', 'Note (0)', 'Attribute (1)', 'Relationships (5)', 'History (0)', 'Image (0)', and 'Hierarchy'. The 'Attribute (1)' tab is selected. Below the tabs is a section titled 'Add new attributes' with a plus icon. Below this is a table with two columns: 'Attributes' and 'Value'. The table contains one row with the attribute 'Is part of subvocabulary' and the value 'Geographical above country level'. There are edit and delete icons next to the attribute.

Figure 43. Concept/Term Area: Attribute.

5. Tab Relationship

- Shows the relations that hold between the selected concept and other concepts (Figure 44).

The screenshot shows the 'Relationship' tab interface. At the top, the concept name is displayed: 'genetic drift (en)'. Below this is a row of tabs: 'Term (1)', 'Definition (1)', 'Note (0)', 'Attribute (0)', 'Relationship (1)', 'History (1)', 'Image (0)', and 'Hierarchy'. The 'Relationship (1)' tab is selected. Below the tabs is a section titled 'Add new relationship' with a plus icon. Below this is a table with two columns: 'Relationship' and 'Concepts'. The table contains one row with the relationship 'Influences (en)' and the value 'gene frequency(en); allele frequency(en)'. There are edit and delete icons next to the relationship.

Figure 44. Concept/Term Area: Relationship.

6. Tab History

- Shows the history of the selected concept (Figure 45):
 - Creation date of concept
 - Date of last update
 - Term status
 - Detailed information on term changes.

C genetic drift (en)

Term (1)Definition (1)Note (0)Attribute (0)Relationship (1)History (1)Image (0)Hierarchy

Creation date	1998-09-04 00:00:00
Last update	2011-09-28 19:10:17
Status	Published

Change	Old value	Action	User	Date
MeSH		concept-edit-ext-sour	Johannsen	28-09-2011 13:10:

Figure 45. Concept/Term Area: History.

7. Tab Image

- Shows an image of the concept.

8. Tab Hierarchy

- Presents in a compact way the hierarchy line from the selected concept to its top term (Figure 46).

C Genetically engineered organisms (en); genetically modified organisms (en); GMO (en)							
Terms (3) Definition (1) Note (1) Attribute (0) Relationships (3) History (4) Image (0) Hierarchy							
C organisms (en)							
C genetically modified organisms (en)							
C transgenics (en)							
C Genetically modified microorganisms (en)							

Figure 46. Concept/Term Area: Hierarchy.

In the following, we highlight some crucial operations that can be performed on concepts.

8.2 Adding a new concept

This action may be performed by all users.

To add a new concept, do the following steps:

1. Choose where in the hierarchy to add the new concept.
2. Click on the **[+]** icon in the bar above the concept hierarchy (see Sec. 8.1.1, and Figure 39), a window opens with title **Create a new concept**.
3. In the window, add the following pieces of information (Figure 47):
 - a) **Term** for the concept.
 - b) Select **Language** from the drop down list, and
 - c) click on the **Create** button
4. The system checks if the suggested term is already used in VocBench. If the label does not yet exist, a new window opens where you choose (Figure 48):
 - a) If the new term will be a preferred term by checking the box, or not.
 - b) The position in the hierarchy where the concept should be added. The following possibilities are available:
 - i. **Child of the selected concept**
 - ii. **Same level as the selected concept**
 - iii. **Top level concept**
5. Then, click **Create**, or **Cancel** to abandon.
6. After clicking **Create** concept, a new window appears, titled **Add new term** <label of concept>. If you want to add more terms, e.g. in other languages, then click on the button **Add and Repeat**, and repeat steps 3 to 6 (Figure 49).
7. If the **concept already exists**, a window with the following message appears (Figure 50): "Concept already exists". In that case, enter a new term, and click on **Check availability**. Then follow steps 4 to 7.

Note: Currently, VocBench does not implement any constraints on the number of preferred terms introduced. So, please be careful!

To add more information to the concept, use the tabs in the Concept/Term area (see Sec. 8.1.2).

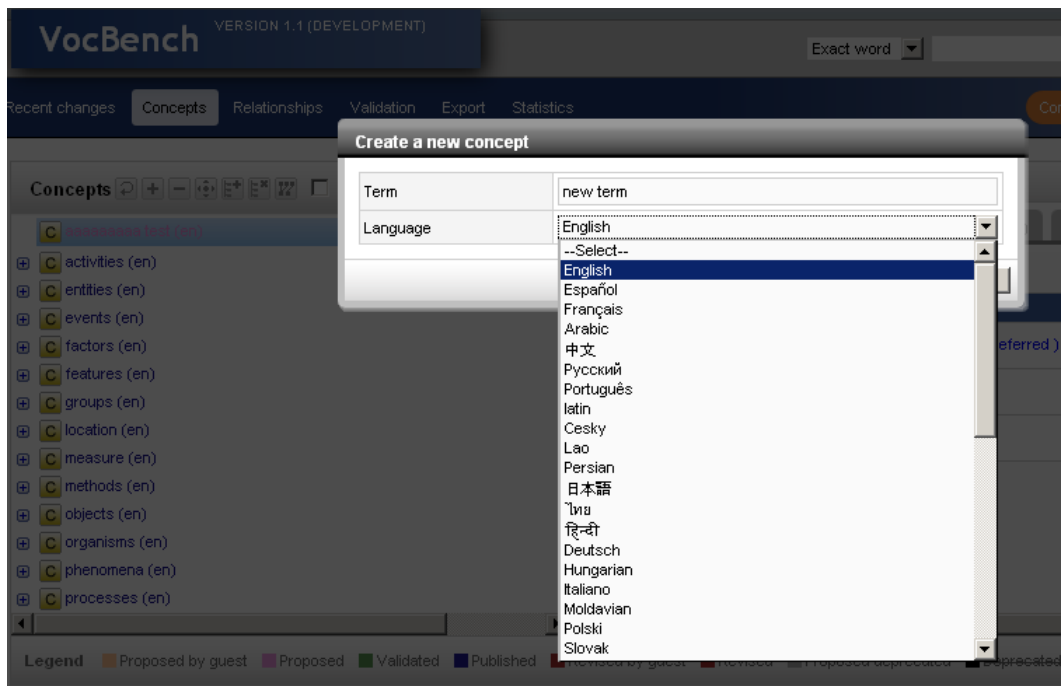


Figure 47. Create a new Concept: Add Term and Language.

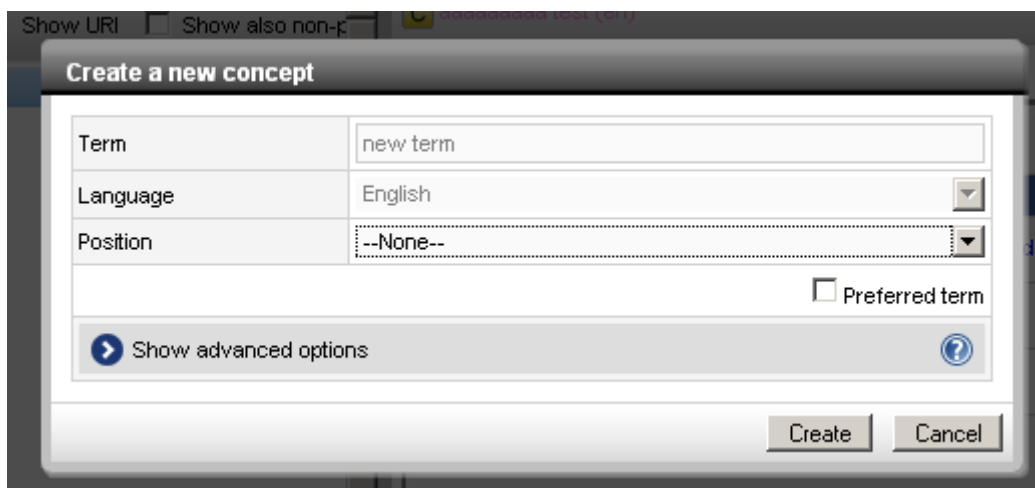


Figure 48. Create a new Concept: Select 'Preferred Term'.

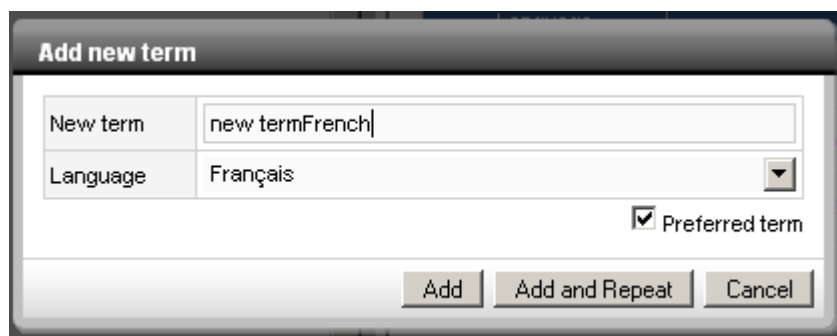


Figure 49. Add new Term to Concept (repeat).

Create a new concept

Term: new term

Language: English

⚠ Concept already exists Check availability

Concept	Last update date
new term (en)	01-04-2011 09:19:39

1 of 1

Create Cancel

Figure 50. Create new Concept: ‘Concept already exists’.

8.3 Deleting a concept

This action may be performed by Editors, Validators, Publishers and Administrators.

1. Select the concept in the Concept hierarchy.
2. Click on the [-] icon in the bar above the concept hierarchy (see Sec. 8.1.1, Figure 39).
3. A warning message is visualized: “You are about to delete a concept with all its associated terms <...>, all its subconcepts, and all its relations to and from other concepts. Before deleting this concept, please make sure that all its sub-concepts (if any) are deleted or moved under a new parent. Also make sure that all its relations are to be deleted. The new status of the deleted concept will be “proposed deprecated” (Figure 51).
4. Follow the instruction, then when ready, click **Delete**.

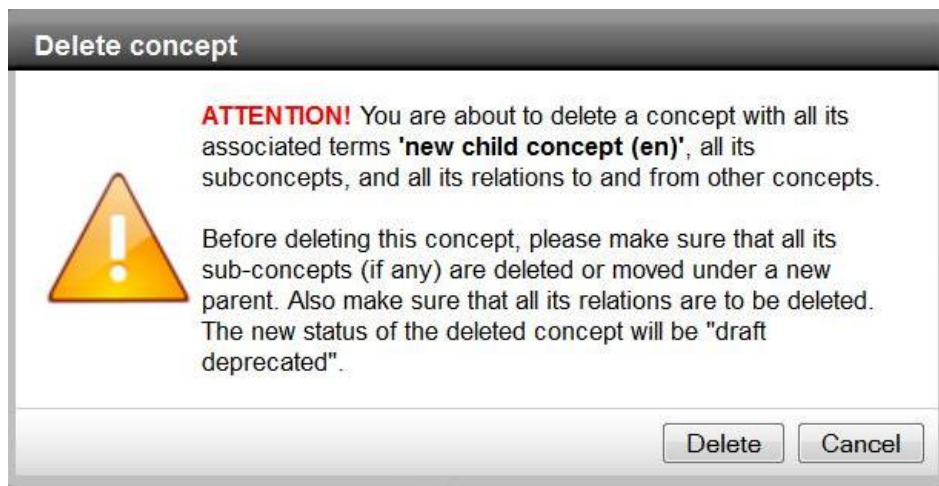


Figure 51. Delete Concept: Warning message.

Note: When a concept is deleted, its status becomes **Proposed Deprecated**, but its terms in all languages do not change status!

8.4 Editing the information attached to a concept

This action may be performed by Term Editors, Ontology Editors, Validators, Publishers and Administrators.

To edit any of the pieces of information attached to a concept:

1. Select the concept in the concept hierarchy, and
2. Click on the appropriate tab.

In the following sub sections, the most relevant actions on concepts are singled out and explained in details.

8.5 Adding a definition to a concept


To provide a definition for a concept, follow these steps:

1. Click on **[+] Add definition**.
2. A window opens (see Figure 52) in which the following pieces of information should be added:
 - Definition
 - Language: select language from drop down list.
 - Source for the definition. Possible sources are, e.g. Wikipedia.
 - Provide URL for the source.
3. Click **Create** or **Cancel**

Figure 52. Add Definition.

8.6 Edit a definition of a concept

It is possible to edit the entire definition, or the source.

1. Click on the Edit icon of the item you want to edit .
2. Revise definition, and submit your changes.

8.7 Delete a definition of a concept

1. Click on the [-] Delete icon next to the item you wish to delete.
2. Delete and confirm.

8.8 Create relations between concepts

To **create** a relation between two concepts, follow these steps:

1. Select the first concept (by browsing or searching).
2. Click on the **Relationship** tab (Figure 53).
3. Click on **[+] Add new relationship**. A popup window will appear where you can specify the relationship to use, and select the other concept in the relation (Figure 54).
4. To select a relationship, click on the **Browse** button, and the **Relationship browser** will open (Figure 55). To view the complete list of relationship types, click on **Expand all** at the bottom of the window, and select from the list the appropriate new relationship.

5. To select the second concept in the relation, click on the **Browse** button. The **Concept browser** will open, where you can search and browse for the desired concept (Figure 56). Once the concept is identified, click **Submit** (or **Cancel**).
6. Click the **Create** button to confirm the new relationship (Figure 57).
7. The new relationship is now visible in the Concept/Term Area (Figure 58).

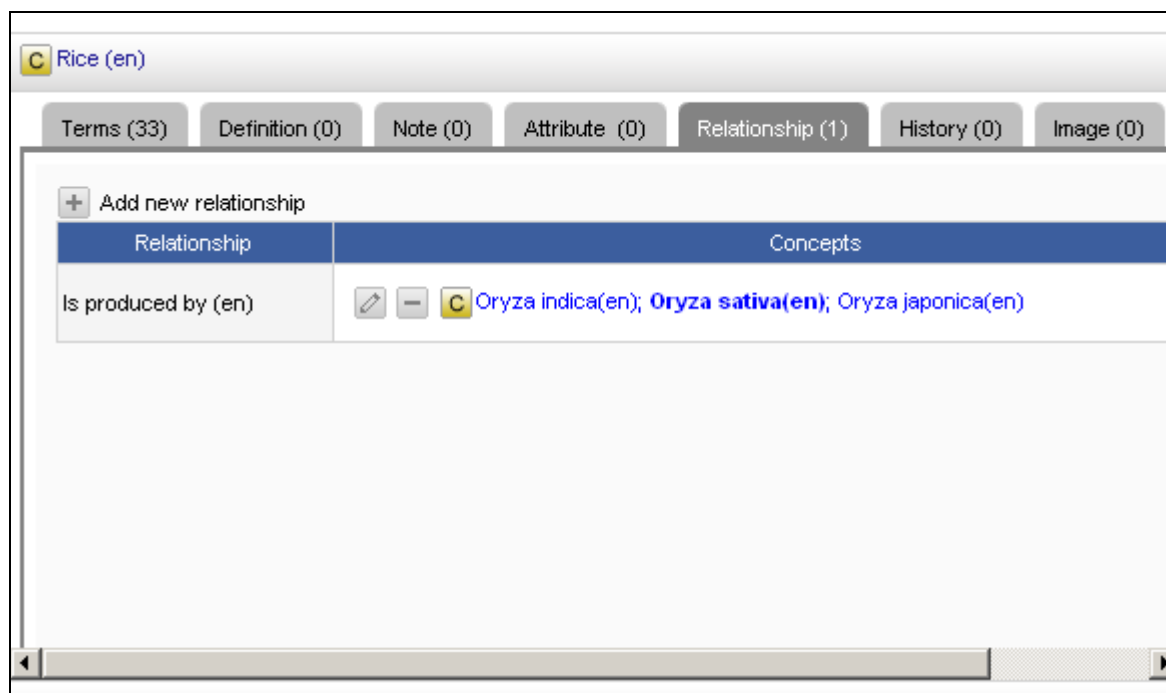


Figure 53. Create Relation between Concepts: Select Relationship Tab.

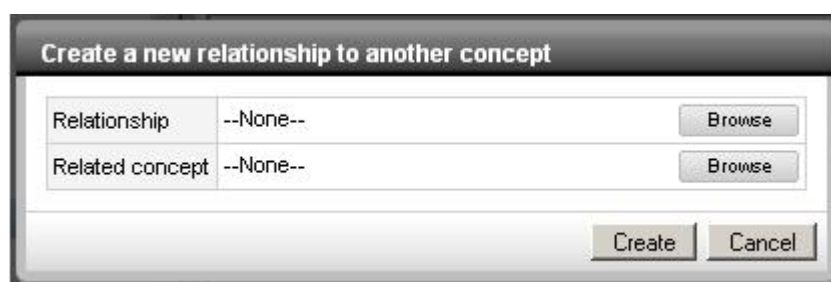


Figure 54. Create new Relation between Concepts.

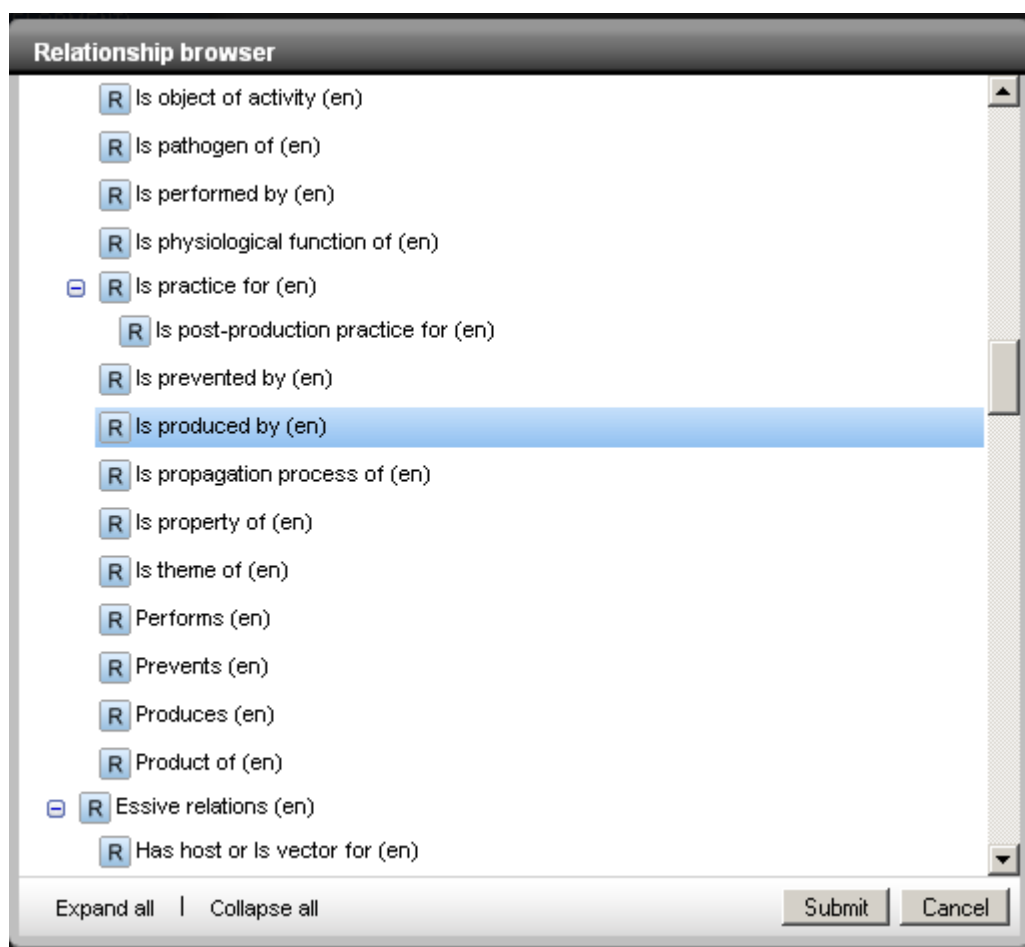


Figure 55. Relationship Browser. Create new Relation between Concepts.

Concept browser

Oryza glaberrima View concept tree

Search results

Concept	Last update date
Malignant catarrhal fever virus (en)	05-11-1998 02:09:00
Mycorrhizae (en)	19-04-2007 19:33:18
Endomycorrhizae (en)	01-11-2009 17:00:00
Vam (fungi) (en); Vesicular arbuscular mycorrhizae (en)	11-11-1997 17:00:00
African rice (en); Oryza glaberrima (en)	05-11-1998 02:09:00
Oryza fatua (en); Oryza rufipogon (en)	05-11-1998 02:09:00
Oryza indica (en); Oryza japonica (en); Oryza sativa (en)	03-06-2009 06:09:43
Oryza longistaminata (en)	18-05-2009 12:33:27
Oryza perennis (en)	03-06-2009 05:44:04
Oryza punctata (en)	18-05-2009 12:34:54

◀ 1 of 1 ▶▶

Figure 56. Concept Browser. Search related Concept.

Create a new relationship to another concept

Relationship	Is produced by (en)	<input type="button" value="Browse"/>
Related concept	Oryza glaberrima (en)	<input type="button" value="Browse"/>

Figure 57. Create new Relation between Concepts: Information added.

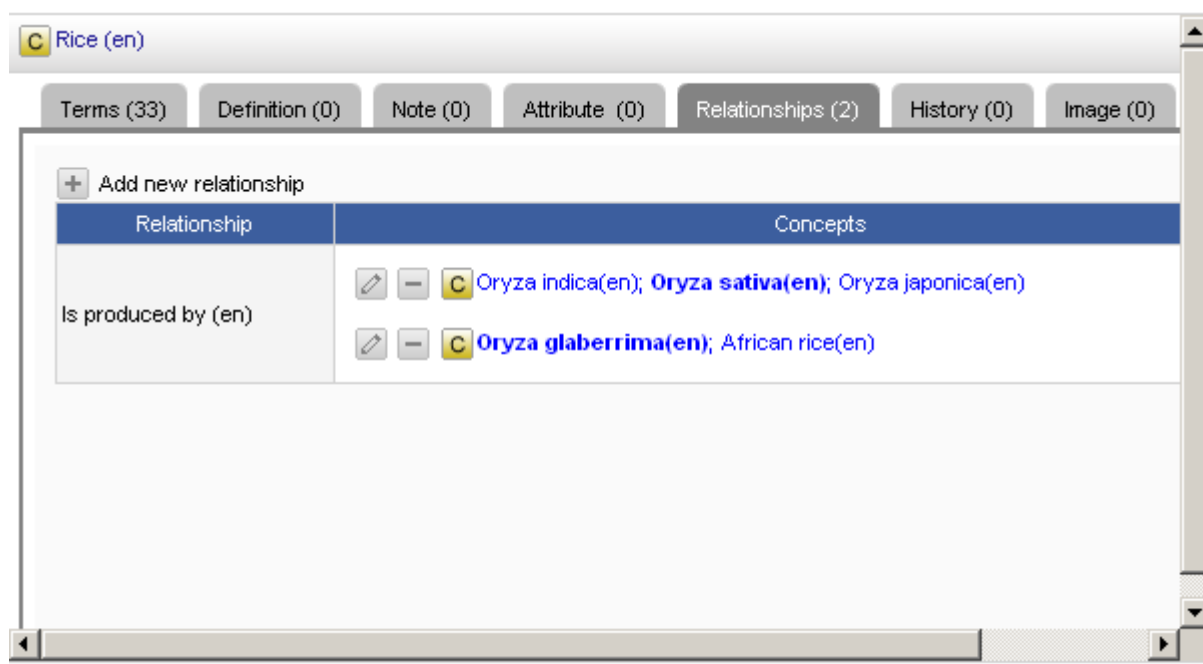


Figure 58. Create new Relation between Concepts: Completed.

9 Terms

Terms associated to concepts are displayed in the Concept/Term area of the Concept module (see Sec. 8.1, Figure 38).

9.1 Adding a new term

1. To add a new term, click on **[+] Add new term** (Figure 59) .
2. In the window that opens, add the term, select the language from the drop down list, and decide if the new term is a **Preferred term** or not (Figure 60).
3. Click **Submit** or **Cancel**.

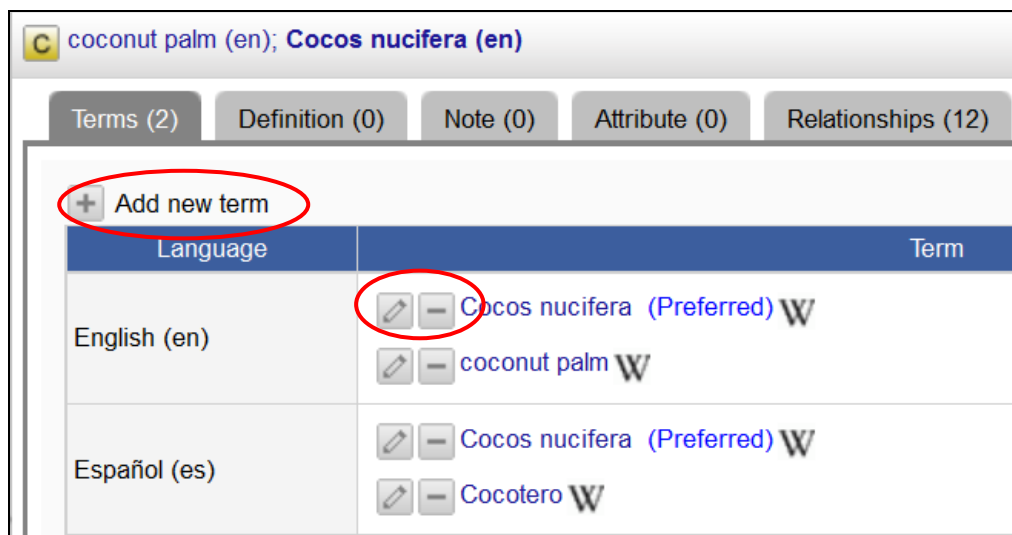



Figure 59. Add / Edit / Delete Term.

The screenshot shows a dialog box titled 'Add new term'. It has two input fields: 'New term' and 'Language' (a dropdown menu with '--Select--' as the current selection). Below these fields is a checkbox labeled 'Preferred term'. At the bottom of the dialog are three buttons: 'Add', 'Add and Repeat', and 'Cancel'.

Figure 60. Add new Term.

9.2 Editing or Deleting a term

To **edit** a term:

1. click on the edit icon next to the term (see Figure 59): 
2. In the window (Figure 61) that opens, revise the term, and click **Submit** (or **Cancel**).

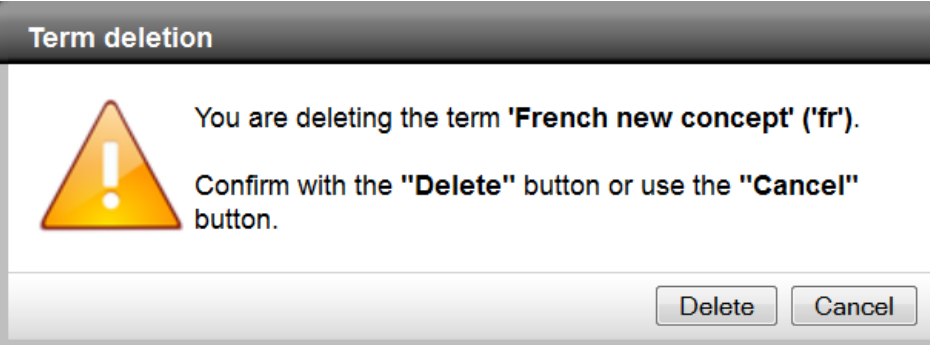


The 'Edit term' window has a title bar 'Edit term'. It contains two input fields: 'Term' with the text 'Cocos nucifera' and 'Language' with a dropdown menu showing 'English'. To the right of the language dropdown is a checked checkbox labeled 'Preferred term'. At the bottom right are two buttons: 'Submit' and 'Cancel'.

Figure 61. Edit Term.

To **delete** a term:

1. click on the [-] icon next to the term.
2. A window opens showing a warning message (Figure 62).
3. Click on **Delete** if you are sure to delete the term, or click **Cancel**.



The 'Term deletion' window has a title bar 'Term deletion'. It features a yellow warning triangle icon with an exclamation mark. To the right of the icon, the text reads: 'You are deleting the term **'French new concept' ('fr')**. Confirm with the **"Delete"** button or use the **"Cancel"** button.' At the bottom right are two buttons: 'Delete' and 'Cancel'.

Figure 62. Delete Term.

9.3 Information about a term

When clicking on a term, a new window opens, presenting three tabs containing the information associated to it:

1. History (Figure 63)
2. Relationship (Figure 64)
3. Attributes (Figure 65)

Information for *coconut palm* (en) [Non preferred term]

History (0) Relationship (1) Attributes (2)

Creation date	1981-01-26 00:00:00
Last update	
Status	Published

Change	Old value	Action	User	Date
There is no data to display.				

Figure 63. Information about a Term: Tab History.

9.3.1 Tab History

Information shown in this tab is automatically collected by VocBench. For each term, one can see the following pieces of information:

- Creation date
- Last update
- Status

Moreover, a table shows the sequence of changes applied to the term.

9.3.2 Tab Relationship

In this tab one can visualize the term-to-term relations that hold for the selected term.

Information for *coconut palm* (en) [Non preferred term]

History (0) Relationship (1) Attributes (2)

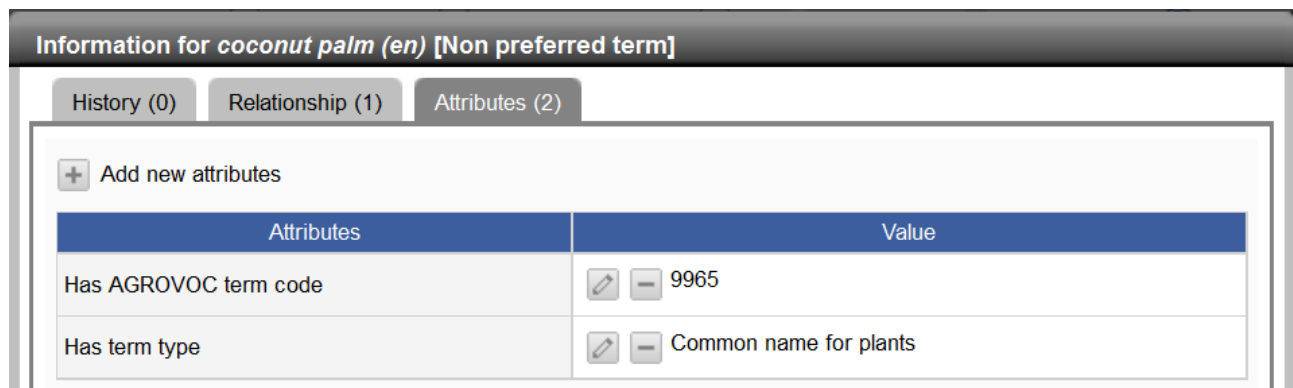
+ Create new relationship

Relationship	Term
Has scientific name (en)	Cocos nucifera (en)

Figure 64. Information about a Term: Tab Relationship.

9.3.3 Tab Attribute

In this tab one may see the attributes assigned to the selected term. In **Error! Reference source not found.**⁵⁷, attributes for a term in AGROVOC are shown.



Information for *coconut palm (en)* [Non preferred term]

History (0) Relationship (1) **Attributes (2)**

+ Add new attributes





Attributes	Value
Has AGROVOC term code	  9965
Has term type	  Common name for plants

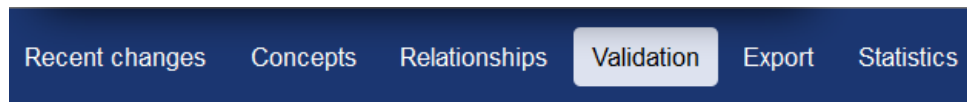
Figure 65. Information about a Term: Tab Attribute.

9.4 Editing information about a term

1. Click on term, a window opens with the three tabs shown in Figure 63.
2. Click on the tab **Relationship** or **Attributes**, to add, edit or delete information.

10 Validation module

The Validation module contains all the changes done by different users which are to be validated. The Validation module is accessible to Validators, Publishers and Administrators only.



When entering the Validation module (Figure 66) you will see, in ascending chronological order, the list of all actions to be validated.

Validation Apply filter										
Concept / Term / Rela	Change	Old value	Action	Owner	Modifier	Creation dat	Modified dat	Status	Validate	Note
C actividades (es), activité (fr), activities (en)	T activities (en)	T activities (en)	term-edit	Administrator	Administrator	24-09-2008 18:00:00	11-08-2011 10:25:12	Revised	<input type="checkbox"/> Accept <input type="checkbox"/> Reject	
C Insecta (en), Insecta (fr), Insects (en), Insecte (fr), INSEKT (de), Insectos (es), Insecta (es), INSECTA (de)	T ndTelugu (te)		term-create	Johannsen	Johannsen	05-09-2011 09:36:57	05-09-2011 09:36:57	Proposed	<input type="checkbox"/> Accept <input type="checkbox"/> Reject	
C new term (en)		C new term (en)	concept-delete	Johannsen	Johannsen	05-09-2011 10:29:16	05-09-2011 10:30:22	Proposed depre	<input type="checkbox"/> Accept <input type="checkbox"/> Reject	
C new term (en)		C new term (en)	concept-delete	Johannsen	Johannsen	05-09-2011 10:29:16	05-09-2011 10:38:12	Proposed depre	<input type="checkbox"/> Accept <input type="checkbox"/> Reject	
T Insects (en)	R Has translation (en)		term-relationship	lavanya	lavanya	05-09-2011 12:46:16	05-09-2011 12:46:16	Proposed	<input type="checkbox"/> Accept <input type="checkbox"/> Reject	

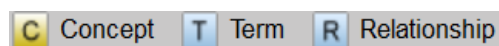
1 of 2

☐ Accept all ☐ Reject all

Figure 66. Validation Module.

The table contains in eleven columns the following information/options:

1. Concept / Term / Relationship / Users: shows the element(s) that was/were changed.



2. Change: shows the current value of the element.
3. Old value: shows the previous value of the element.
4. Action: indicates the change action applied to the element.
5. Owner. shows the owner of the element.
6. Modifier: indicates by whom the change was performed.
7. Creation date: shows when the element was created.
8. Modified date: Indicates when the change was applied.
9. Status: shows the current status of the element.

10. Validate: option to accept or to reject the modification.

11. Note: A comment about the validation action may be entered here. The comment is automatically sent to the author of the change.

10.1 Validation filter

You can filter the list of validation actions presented in the Validation table. There is an **Apply filter** option at the top right of the **Validation module** (Figure 66). The filter functionality is very useful when there is a long list of issues to be validated.

Clicking on **Apply filter** a window opens, showing the following specific filter options to facilitate the selection for validation (Figure 67):

The screenshot shows the 'Validation filter' dialog box. It contains three main filter sections:

- Filter by user:** A list of users with checkboxes. The 'All' checkbox at the bottom is circled in red.
- Filter by action:** A list of actions (e.g., concept-create, concept-delete, concept-edit, relationship-create, relationship-edit, relationship-delete, note-create, note-edit, note-delete, definition-create, definition-translation-edit, definition-delete, image-create, image-translation-edit, image-delete) with checkboxes. The 'All' checkbox at the bottom is circled in red.
- Filter by status:** A list of statuses (e.g., Proposed by guest, Proposed, Revised by guest, Revised, Proposed deprecated, Validated) with checkboxes. The 'All' checkbox at the bottom is circled in red.

Below the 'Filter by status' section is a 'Filter by date' section with radio buttons for 'Today', 'This Week', and 'This Month'. It also has 'From' and 'To' date input fields and a 'Clear Date' button. At the bottom right of the dialog are 'Submit' and 'Cancel' buttons.

Figure 67. Validation Filter.

1. Filter by user: By default all registered users are selected. To modify the selection, uncheck the check box **All** (at the bottom of the list), and select the user(s) whose actions you want to validate.
2. Filter by action: By default all possible actions are selected. To change the selection, uncheck the check box **All**, and select the actions you want to check.
3. Filter by status: By default all term statuses are selected. To modify the selection, uncheck the check box **All**, and select the actions you want to check.

4. Filter by date: You may choose a specific date or a period when actions were performed, e.g. selecting **Today**, **This Week**, **This Month**, or enter a date **From To**.

To perform the selection, click on **Submit**, and a window opens, showing the concepts or terms which according to your selection need to be validated.

Note: The concepts/terms for validation can also be directly selected from the table without using the filter option.

10.2 Validation process

The following steps are to be followed in the validation process:

1. To validate the changes, in the **Validate** column click on the check box **Accept** or **Reject** of the concept or term you want to validate. Alternatively, select the options **Accept all** or **Reject all** (at the bottom of the **Validation module**).

Before validation, the status of the selected element may be **Proposed**, **Revised**, or **Proposed deprecated**, as shown in Figure 58. After validation, the element changes to **red** colour, and the status will be changed to **Validated**, **Deleted**, **Deprecated**, or **Published** (in case the validation was done by a Publisher or Administrator).

2. To the right of the **Validate** column, there is **Note** field. The validator can enter a comment, for example explaining why a change was rejected.
3. After accepting or rejecting the issues, click on **Validate**.
4. After each validation the Modifier will be informed by email that his/her changes were accepted or rejected.

Note: After each validation the user should refresh the validation list by clicking on the refresh button at the top left of the Validation module (Figure 66 and Figure 68).

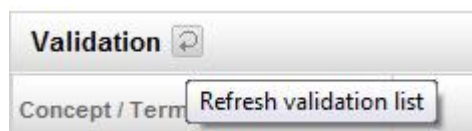


Figure 68. Refresh Validation List.